The Education Digest

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Why the High School Must Be Revived

Live Students and Dead Education

OSCAR HANDLIN

In The Atlantic

IT is high time to reconsider the function of secondary education if we wish to spare our children the chaos that now threatens them in the most vulnerable years of their lives.

The evidence is clear. The number of high-school students is larger than ever before, and it will continue to increase for years to come. In this group are boys and girls of types that did not formerly ascend to this level of instruction; it will be dangerous to neglect their needs and interests. Above all, the high schools now operate in a new social context, of which they must take account. These developments pose a challenge so serious that we can disregard it only at our peril.

The federal census tabulates the population by age groups and projects its size into the future. The number of Americans aged 15 to 19 was 11 million in 1955. In 1965 it will be more than 17 million; in 1970, more than 19 million. These children are already born and on their way toward adolescence. They will enormously expand the pool from which the high-school population of the future will be drawn.

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An ever-larger percentage of the eligible age group will demand and receive a secondary education. As the process of formal education becomes the universal norm, the thing to do, those lacking education suffer increasingly. All the routes up now lead through the high school, and only the misfits or children of the very poor and underprivileged are pushed into the narrowing range of employments from which there is no exit. There is no indication that these trends will be reversed.

The challenge cannot be met simply by increasing existing facilities. The high school was developed for a rather select student

body, and this much larger aggregate will not fit into its established forms.

The problems of the high school change radically as it begins to serve a clientele unselected as to ability.

TALENTED VS UNTALENTED

The situation of talented boys and girls is clear-cut. The old curriculum was made for them; the road to college and the professional schools is open; and a good deal of attention is being devoted to them. They will have to learn to avoid being dragged down by the average of the mass about them. But success in doing so is one test of their ability.

The high school has had less experience in dealing with those who, lacking competence or motivation, are euphemistically called the "academically untalented." The traditional course of study is beyond their grasp, the careers open to them are not clear, there is no room in the labor market, and they comprise a rising percentage of the student body. Formerly, it was possible to shunt them off to various vocational programs that all too often served mainly to get the less able out of the way of the others.

The old forms of vocational education will be even less useful in the future; the same economic changes driving more students into the schools also undervalue the handicraft skills that can be taught there. These programs, therefore, are growing at a far lower rate than are other sectors of secondary education.

Consequently, a large part of the high-school population finds itself enmeshed in an institution that has little relevance to present or future needs. These boys and girls have drifted on to the ninth grade because it follows the eighth. They are told to study subjects they cannot grasp and to acquire skills they may never use. Only athletics, marching bands, and their own social life rescue them from total boredom.

The secondary school must adjust to meet the needs of all these young people. In the 1960's, either it will prepare or it will fail to prepare them for citizenship and for careers.

NO SIMPLE FORMULA

There is no simple formula for reshaping the structure of an institution that prepares some youths for college, some for trades, and that is also charged with equipping all with the ability to vote, to drive cars, to make friends, and to take a useful part in life. The high school must now become something more than a bridge between elementary school and college, a function which hitherto shaped its development. It must focus its attention not on the preparation of one segment or another of its students, but on the development in all of them of the core of habits, ideas, and assumptions that will make them, to the best of their abilities, creative citizens.

To understand what such an institution can best teach, it is necessary to expose two pervasive errors in recent American thought about education. One is the assumption that what is taught is learned. Nothing could be farther from the truth. The rate at which knowledge fades after the final quiz in history, mathematics, or languages is rapid. What is taught simply cannot be equated with what is learned and remembered. Nor is it true that what is not taught will not be learned. When we wish to do so, we learn without teachers, and, sometimes, despite them.

To recognize that not everything that ought to be learned can or should be taught by the school is to set the problem of its curriculum within manageable terms. The high school cannot endow its students with everything they ought to know. It can only equip them to get what they need as they come to recognize the need for it.

TWO TASKS

Given its place in American society and the character of its students, the high school must focus on two tasks: It ought to impart to students the ability to communicate and to be communicated with; and it ought to introduce them to the quantitative techniques on which modern science and technology rest. If it succeeds in these tasks, it will give its graduates the equipment for future learning.

The function of the traditional curriculum elements—reading, writing, and arithmetic—are so frequently misunderstood by teachers as to make instruction in them woefully ineffective. When the class creeps through *Ivanhoe* at the rate of eight pages a day, it is not learning to read; when it parses sentences, it is not learning to write; and when it acquires facility in problem solving, it is not learning the nature of mathematics. The prevailing pattern of instruction has emphasized drill in rules and diligence in the performance of ritual exercises at the expense of understanding the content.

The incorrigible optimist within me insists that the high school can perform these tasks. The processes of comprehension, expression, and measurement can be made real and meaningful – even pleasurable – to adolescents at every level of ability. To do so requires only a decisive clarification of purpose.

MEANS AVAILABLE

Certainly, the high school has available the means of enabling its pupils to acquire through reading some familiarity with the important conceptions of our culture, and through practice in writing and speaking the ability to express themselves clearly.

The classics occupy a central place in such training. These are the great works of human intelligence which, wherever produced, have demonstrated the capacity for being understood over long periods of time and in a variety of places. Acquaintanceship with them intro-

duces the student to the significant common ideas of our civilization. But if these are to be used effectively in offering the American adolescent a glimpse of the seminal ideas of our culture, there must be a change in what and how they are taught to make them more interesting and alive to the students.

ACTUAL PRACTICE

Reading is one prerequisite of learning to write; the other is actual practice in writing, and this the high school offers hardly at all. Year after year, the colleges face a dismal encounter with freshmen who in all their studies have composed only a few 300-word compositions, or less. No amount of exercise in word definition or grammar can take the place of the regular and frequent experience of setting words meaningfully on paper. Also, the disappearance of what a century ago was known as rhetoric has had deplorable effects in the broken sentences and indirect, ambiguous phraseology characteristic of American speech.

The content of instruction in reading, writing, and speaking can readily be adjusted to the varying levels of student ability. The untalented will command a smaller vocabulary; they will absorb a narrower range of meanings from stories; they will apprehend myths and metaphors more readily than abstract symbols or logical connections. But whatever they learn will be of immense use in establishing a means of communication with the rest of the society in which they live.

MATHEMATICS

I write with less confidence and less knowledge of what is wrong with the teaching of mathematics. That something is wrong seems certain. Most young people who are excellent at problem-solving and make perfect scores on the mathematical achievement test do not begin to understand what modern mathematics is about until well into their college careers. What does the vast majority who never go beyond plane geometry have?

The high-school teaching of mathematics seems to reflect the same concentration on rules and exercises that blight the study of language. It needs a shift in emphasis that will introduce all students, at different levels of competence, to the concepts of quantity and space they will encounter throughout their lives.

If the high school can supply a solid groundwork of training in the use of language and of mathematics, the rest of its curriculum need not be so rigidly specified. Let it recognize the variety of students who meet within its halls. Let it offer what courses in languages, art, music, history, science, bookkeeping, machine shop, personal behavior, and athletics its size, budget, and location dictate. Let the students move where interest and ability draw them. Above all, let it occupy the boys and girls in activities relevant to their present

needs and to a future in which leisure may be as prominent a part of life as work.

There need be no fear either that talents will be wasted or that students will lack exposure to important aspects of our culture. Force an unwilling lad into a course in American history or physics and he will learn nothing of value and his presence will impede the learning of those with interest. Let him have instead his course in French or family relations. If he has really learned to read, he will someday see the relevance of the American history to his own life and find available the means of knowing what he should about it. Our colleges manage to produce geologists, astronomers, and philosophers without advance preparation at the secondary level. They can do the same in every sphere of scholarship.

As for the untalented, they will pass these four critical years sharing the social and communal experiences of their fellows. They will not be excluded from the realm of culture by their failure to go on to college, but will catch glimpses of it commensurate with their ability.

We may thus hope to imbue these young people with a sense of community that will make their future work worthwhile. We can endow them with enough awareness of the world in which they live to give them a sense of the value of their labor and of its relation to others. And that same awareness outside the job will help them lead useful lives as parents and children.

What is important is that the high school do well what it can do. It serves a democratic society at a point in the lives of its young people when their future is vague and undefined. It can do no more, but it must do no less, than to endow them, to the limits of their abilities, with the common attributes of our culture. •

"Frills" Aid Reading

A RESEARCH team, working under grants to the University of California College of Education, has found that courses often labeled "frills" are actually helpful in improving reading skills. Pack A. Holmes and Harry Singer, directors of the eight-year study, found that mechanical training, such as shop, was conducive to better reading. Musical training, too, was directly related to excellence in reading. Because of this, the directors reported, schools which are eliminating "frill" courses in favor of "strict emphasis on the three R's" may actually be hurting the skills they are trying to help.—From *School Management.*

A "Charge-a-Plate" to Education

Teaching Machines—Fad or Fixture?

LAWRENCE M. STOLUROW

In Teaching by Machine

TEACHING machines appear to be here to stay. They have many important implications for the future of education, some related to teaching and the teacher, others to the schools as an organization, including its personnel and physical facilities, still others to the effect on students.

The teaching machine seems to be a major breakthrough in education comparable to the book, radio, and television. Its potentiality needs to be explored and effective, efficient means devised for making it available. It can maintain the optimum conditions of communication and control considered essential in modern learning theory. Although mass media communicate effectively, they do not control. They are "open loop" systems, in that they lack the feedback ingredient vital to rapid modification of the learner's behavior systems. The teaching machine is a "closed loop" system which does provide feedback.

In effect, the teaching machine is an educational laboratory. It can do for education what the physics, chemistry, and psychology laboratories have done for their areas. The variables of interest can be manipulated in a rigorous way, conditions can be standardized, etc. The machine can provide information about methods of teaching free of uncontrolled variations due to differences among teachers. Once the basic variables in the instructional process are identified, they can be studied in relation to social and personality factors.

In the teaching process, the machine offers a flexibility in adapting program content and rate of progress to a degree superior to the traditional teacher-class organization. With the traditional arrangement, the frequency of reward and reinforcement is limited to the ability of one teacher. The machine, with flexibility and versatility of programing, can provide frequent learner-reward, can meet the most rigid requirements of

Lawrence M. Stolurow is Professor of Psychology, University of Illinois, Urbana. *Reported from* Teaching by Machine, *Cooperative Research Monograph No. 6, published by the U.S. Office of Education, 1961. 145–50.*

those stressing "mental discipline," can be either factual or thought-provoking, and can include logic or rote drill. Also, the pace can be adjusted to suit the rate of the individual learner.

One authority notes that the machine achieves more adequately the democratic ideal in education. It has equal patience for fast and slow learners. It responds in the same manner to the poor and the rich, to all races, creeds, and religious groups. Furthermore, with mass production techniques, it could extend education to illiterates and outlying groups who otherwise might not have the benefit of education.

While the machines have many implications for the teacher, outmoding or replacing the teacher is not among them. As early as 1926, S. L. Pressey, a pioneer in the field, pointed out that education was the most inefficient of any large-scale undertaking in this country. This, in his view, was due largely to a cultural barrier prohibiting application of modern technology to the teacher's problems, conservatism in the profession, and the fact that teachers were relatively cheap. Pressey said that introduction of automation devices would free the teacher for ". . . her most important work, her developing in her pupils fine enthusiasms, clear thinking, and high ideals."

In a later paper (1932), Pressey pointed out that labor-saving is not only legitimate in education but it may become an economic necessity. Since education is a large-scale industry, it should use quantity production methods. This does not mean mechanization of education but rather freeing teachers from clerical duties and drudgeries to give more time for guidance in learning.

Other authorities repeat that teaching machines are not devices for eliminating the teacher; rather they are a way of multiplying his effectiveness and implementing his instruction. The teachers would remain the responsible planner of the learner's instruction, but no longer tied to routine and specific detail of instruction and drill. The human teacher, free to plan and determine individual needs, can develop new efficient methods of instruction, keep course content up to date, and spend more time getting to know his students and his subject matter.

In a paper published in 1957, S. Ramo presents what is probably the most imaginative conjecturing about impact of teaching machines on the future of education with respect to its physical plant and management procedures.

SCHOOL OF THE FUTURE

In the school of the future, as Ramo sees it, the child will possess a "charge-a-plate" identification unit which would be inserted in a machine to identify him and to locate his records throughout his educational development. The typical school day would consist of a number of periods spent, as now, in

rooms with other students and a teacher; however, some periods would be spent with the machine. Even in the classroom learning situation, which would involve not only a human teacher but also motion pictures and television, there would be programed questions to which the student would respond by pushing various keys. In this way the student becomes an active participating learner rather than a passive receiver of information and, with a machine, would be constantly in touch with the teacher.

When the student is alone in front of a machine-tutor he is equipped with controls that permit him to see animated films and other aids which contribute to his learning. In such a situation he is completely on his own and can pace the material at a rate he chooses. He is constantly required to respond to questions. The machine is prepared to go over a principle from time to time with altered presentations and additional detail, as required, and possibly switch to alternative methods of presentation, all available in its library on request. Ramo envisions all this to be backed up by a whole new industry.

SCHOOL PERSONNEL

With respect to school personnel, this revolution in education would mean that high-school teaching staffs would include educational analysts, specializing in various subjects, who would review student records on an individual basis.

The analyst specialists would diagnose information and difficulties and make recommendations for improvement. They would seek constantly to discover problems and needs for special attention through direct contact with teacher and pupil. Thus the school would be partially transformed into a guidance center. The staff member would be elevated to the role of thinker and planner. Teachers would provide the essential educational functions.

Ramo also envisions a new type of specialist, the "teaching engineer," an engineer concerned with the educational process and with the design of machines as well as with the design and programing of instructional materials, a person for whom knowledge of computer operation and programing would be essential.

STUDENT OF THE FUTURE

It is difficult to draw an imaginary picture of the student of the future. Since the industrial revolution, man seems to have learned to live with and derive benefits from a wide assortment of machines; the need to learn to use different types of machines seems to be accelerating. A new profession, human engineering, has developed to meet the challenges of this need. It is the human engineer's job to work with the hardware engineer at the design stage to achieve maximum efficiency. So, the teaching machine will be designed to be used by students. The demands made on the

student will be minimal and will be determined by educational objectives, e.g., the need to learn to write.

If machines are widely used, the student may learn to study by himself and to play and work with others. Thus, an important separation will be achieved. After all, what symphony was written by a group? What scientific theory was the product of a group? While groups have a very important place in education and students need experience with groups, might it not be better for the student to study alone and to use what he has learned in a group setting?

A question frequently posed is whether these machines are just an educational fad or will they become a fixture in our schools. The answer is a matter of opinion and not of fact, since evidence must be accumulated for several years to come. Certain facts argue that teaching machines will become a fixture.

The machine can provide for controlling all teaching-learning conditions to a degree not attainable with books or other media. The machine is designed to take the learner from a state of lack of knowledge to full knowledge in such a way as to suit his individual needs. A conventional textbook does not always do this. In fact, in serving several purposes, such as storage function, access function, and teaching function, the book must compromise each to satisfy all. The machine, on the other hand, serves a single purpose: teaching.

Most mass media suffer from their failure to make specific cues and responses clear. Typically, they do not require an overt response which informs the learner of his progress. The teaching machine displays one item of information at a time and makes salient the critical cues. Also, if the learner fails to understand a point, he can repeat it before going on. The machine also requires or makes almost mandatory some form of response before correct answers are supplied. With a teaching machine, the learner is in control, in that his responses determine what he does next within the preplanned limits of the program. Thus there is feedback and adjustment of the learning situation to the needs of the individual.

The teaching machine, therefore, appears to be a potential fixture in the educational system and not just a fad. Its problems are those attendant on anything new; it takes time to derive maximum benefit from its use. •

A TEACHING machine is no better than its program and the skill and understanding with which it is used. It should be considered a promise, not a cure-all; a challenge, not a threat.—*Helen Nowlis,* University of Rochester.

What Are the Dangers?

What Teaching Machines Can and Cannot Do

ROBERT B. NORDBERG

In

The Catholic Educational Review

TEACHER, do you know these terms: Retractable Skinner Box, Single-door Lashley Jumping Stand, Graham-Gagne Runway, Pressey Multiple-Choice Board? They are varieties of teaching machines and if you do not know them now you soon will. These devices will be to the 1960's—for better or for worse—what the standardized testing movement was to the 1930's.

This articles will try to state what teaching machines can and cannot do, what opportunities and dangers they pose, and what should be done about them.

The writer some time ago developed a six-phase theory of communication and sought to indicate some of its procedural implications. One need not accept this theory totally to have a basis for highlighting the limits of teaching machines. However, the six-phase theory provides a handy way to analyze our problem. Here, briefly, are the six phases:

(1) The sender (writer, speaker) has ideas to impart. (2) He selects symbols likely to convey his idea. (3) He actualizes these symbols in speech, writing, or otherwise. (4) These concretized symbols are encountered by the receiver (reader, listener). (5) The reader identifies them as the symbols they are. (6) He associates meanings with the symbols—not necessarily the meanings intended by the sender.

An idea is the direct representation in the mind of the nature of something. It belongs to the spiritual realm, as does the intellect that conceives it. A machine belongs wholly to the physical realm.

In terms of the six phases of communication, what can a machine do? It cannot handle phase one, because only human or superhuman creatures can have an idea. It cannot handle phase two, because only an agent which can have an idea can relate a symbol thereto. The machine can deal with phase three *if* an intelligent human being using it is taking care of the first two phases and programing

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the machine accordingly. The machine cannot take care of phase four except in the case of a machine talking to another machine. The machine cannot take care of phase five, because it cannot contemplate a symbol in the abstract, but only rearrange concretized symbols. Nor can it take care of phase six, for that requires another intelligent being—the human receiver.

In sum, then, no machine, present or future, can deal with more than one (the third) of these six communicative stages, and only this at the hands of an intelligent being. In such hands, the machine can indicate to a pupil that he has or hasn't, the "right answer," but it cannot deal with interpretive problems that might arise. If the pupil is so hopelessly unmechanized that he demands to know *why* this is the right answer, or isn't, the machine might paraphrase Chaucer:

> I know not how these things may be;
> I give the answer given to me.

Educational psychologists generally agree that the two best proofs of meaningful, solid learning are paraphrasing and application. Machines can deal with applications only in an isolated, superficial way, and they have yet to do much with paraphrasing. It takes a mind to judge a paraphrase.

For the most part, these devices tend to operate under the stimulus-response psychology of Edward L. Thorndike. They fall short of any organismic treatment of the learner, and fall shorter of the concept of a learner who, besides being an organismic whole, is a rational creature.

Our critique so far has been concerned only with a hylomorphic versus a materialistic conception of the learner. Another very important, related aspect concerns education for organization and expression of knowledge as against education for "checking the right answer." Surely everyone will agree that systematic arrangement of material and clear and effective articulation are "of the essence" in education. The creed of the machine, though—and, usually, of those who find machines fascinating—is that everything is the sum of its parts. Partly because the machine cannot think, cannot program itself, it cannot in the last analysis help us at all in the crucial business of teaching students to organize and express what they know. This is doubted by some. Regarding a selfprograming machine, one writer declares, ". . . only the ostrichist will dare to say that the thing is impossible."

STULTIFY CREATIVITY

The problem of organization is taken up by E. Galanter of the University of Pennsylvania: "It appears that an aid can only teach association, or rote materials, and therefore can never teach a child to be creative, and, in fact, may result in stultifying any creativity that he may have."

Contrary to one verbalized fear, there is no danger that the machines will out-think their inventors and gain control of the learning process. The danger—indeed, the present and growing reality—is that many teachers will approach human learners as if they were robots, thus failing to utilize a world of opportunities for promoting insightful and integrated learning. The danger is that preoccupation with the trivia which has been the curse of schools since schools began will be increased incalculably by machines.

Another real danger is the nationalized (and almost certainly secularized) curriculum. Educational theory is already being shaped partly by vested interests of companies producing the sixty million standard tests taken each year in this country. Probably, in coming decades, theory will also be shaped by vested interests of makers and sellers of so-called teaching machines.

All this does not mean teaching machines cannot be of use. They can be of use in teaching cut-and-dried, completely unambiguous subject matter, such as spelling or simple computation, and only then when directed and actively supervised by a teacher and subjected to frequent review and criticism.

The writer would strongly urge teachers who are not mechanists and behaviorists to use them only for the above purposes, and to speak up bravely to all who make excessive and naive claims for the machines. Those who opposed the excesses and absurdities of the testing movement in the 1930's were called anachronisms and die-hards. Many who went all out for standard tests are now beating their breasts and confessing their folly. Must the whole cycle be repeated over machines? •

Machine Problems

• A card-punch calculating machine at Kent State University, Ohio, "flipped its digits" recently. The machine calculates each student's over-all grade for each university quarter. The machine indicated that 560 of the school's 7,608 students had flunked, and dismissal notices were sent out. Some of the students couldn't believe it. They checked with their deans. Result: Repairs were made on the machine, the cards were run through again, and errors were corrected.

• Nearly 1,000 wrong scores were reported last December for students who took the College Entrance Examination Board tests. An electronic scoring machine failed to "read" some of the student's identification numbers on the answer sheet. Some students received scores for tests they had not taken.

A Landmark in Educational History

The Battle for New York City's Teachers

MYRON LIEBERMAN

In Phi Delta Kappan

LAST June, New York City's teachers voted by more than an 18,000 majority in favor of collective bargaining by employes licensed by the superintendent of schools. During the 1961-62 school year, the city's 49,000 teachers will vote on (1) whether they favor a system-wide or divisional basis of representation; and (2) what organization they wish to bargain for them. This vote is likely to be one of the most important educational events of the 1960's.

The following is an attempt to clarify some of the major issues involved. Despite their crucial importance, these issues are not being clarified by the mass media, educational journals, or the competing organizations.

The significance of the New York City collective bargaining election is found in its potential impact on the National Education Association (N E A) and the American Federation of Teachers (AFT). Presently, the NEA with about 714,000 members (49 percent of the nation's total instructional staff) is by far the larger of the two organizations. About 1,317,000 persons are members of the 64 state education associations affiliated with the NEA.

In contrast, the AFT enrols just under 60,000 teachers, about 4.0 percent of the national total. Generally, teachers with membership in state and local federations join simultaneously in the AFT itself so the number of teachers enrolled in federations is very close to total AFT membership.

Although over-all AFT membership is much smaller than NEA membership, the AFT is larger in several major urban districts, such as Chicago, Detroit, and New York. In 1960-61 there were only 749 NEA members to at least 6,000 AFT members in New York City. Should AFT locals in these central cities establish themselves as bargaining agents for teachers, the results could be disastrous to the NEA. We are only a few years away from metropolitan teachers' organizations, and the organization which prevails in the central cities will eventually prevail in the suburbs. The New York City election may indicate the direction in which teachers are likely to go.

Myron Lieberman is author of The Future of Public Education *and is educational consultant to a major publisher. Reported from* Phi Delta Kappan, *XLIII (October 1961)*, 2–8.

In view of the three-to-one vote for collective bargaining, we can assume that most teachers will vote for some organization. They could, however, vote for (1) an organization not affiliated with either the NEA or the AFT; (2) an organization affiliated with the NEA; or (3) the United Federation of Teachers (UFT), the New York local affiliated with the AFT.

Despite the many weaknesses of the AFT and the NEA, and despite the fact that less than 25 percent of the city's teachers are currently enrolled in these organizations, I doubt whether any organization not affiliated with either can win. The inevitable outcome of a vote for an organization without state and national affiliates would be inadequate representation or none at all at state and national levels.

The decisive point is that, under present circumstances, it is more realistic to work within existing national organizations than to start new ones. For this reason, we must analyze briefly the issues that divide the NEA and the AFT. The major differences concern administrator membership and affiliation with labor.

ADMINISTRATIVE MEMBERS

The NEA has no constitutional restrictions on administrator membership. The AFT has constitutional provisions prohibiting membership by superintendents and permitting membership to other administrators and supervisors only under certain safeguards designed to prevent administrator domination of AFT locals.

The NEA takes the position that the exclusion of administrators is not appropriate for "professional" organizations and also that, since administrators and teachers must work together, they should be in the same organization.

NEA literature on administrator domination ignores the fact that the American Association of University Professors has an even stricter prohibition against administrator membership than does the AFT. It also ignores the fact that today engineers and scientists, who have a much higher level of training than teachers, are enrolled in organizations which exclude administrative personnel from their ranks.

The NEA naturally denies the charge that it is administrator dominated, but policies proposed by its leaders in New York City would have weakened the teachers more than anything the Board of Education proposed. In November 1960, Eric Rhodes, director of the New York City office of the NEA, urged that "no organization be eligible for nomination as bargaining representative unless it gives complete assurance that it will adhere to the law and that it will not call its members into strikes." Similar sentiments were expressed by other NEA leaders at this time.

To tell your employer that you will continue to work no matter what he does—the practical signifi-

cance of a no-strike clause—is to encourage the very kind of employer behavior that produces strikes. Unless there is administrator domination or orientation, it is difficult to understand why the leaders of a teachers' organization would advocate that recognition as a bargaining agent be limited to organizations which undermine teacher bargaining power even before the election is held.

A "no-strike" policy is often advocated as professionalism. Actually, all major professional codes of ethics not only permit but require their members to withdraw their services under certain conditions. However, since doctors, lawyers, and other fee-takers do not work for a single employer, there is no occasion for them to withdraw their services simultaneously. Thus even if it were true that they do not strike (and it is *not* true), the reason has nothing to do with the notion that strikes are unprofessional *per se*.

Basically, unrestricted administrator membership is wrong because it leads straight to totalitarianism. Employe organizations behind the Iron Curtain are too weak to protect interests of the public or their members. The reason is that these organizations are dominated by the employer.

Abhoring totalitarianism as individuals, NEA members are usually shocked to hear their membership policies described as such. But policies which are not totalitarian in intent can be so in effect. Unrestricted administrator membership in employe organizations tends to destroy the independence and integrity of the organization whether the employes be public or private, professional or nonprofessional.

Even the AFT has failed to recognize the pervasive influence of administrator domination in teachers' organizations. This is partly due to AFT inattention to the NEA and partly to the limitations of the AFT's program. For example, the AFT pays little attention to certification. In this respect, it is an ineffective union. Effective unions have always paid considerable attention to job control, through such policies as the closed shop or the union shop. Certification is merely a fancy name for job control, except that in education such control is not exercised by teachers' organizations.

In the abstract, most educators favor high certification standards. In practice, the superintendent frequently finds that he cannot hire a regularly certified teacher at the salary he is authorized to offer. Since he is employed to carry out his school board's policy, not the organization's, it is unrealistic to expect him to use his organizational influence to stop himself from hiring teachers with substandard qualifications. Thus, the teachers' organizations do not really throw their strength into eliminating emergency certificates because they are dominated by the superintendents—the group leading the charge

on state education departments to issue emergency certificates.

Professional ethics is another important aspect of professionalization which has been corrupted by administrator domination of teachers' organizations. In an *NEA Journal* article under the heading "How Professional Am I?" such questions were asked as: "Do I support the policies of my principal and superintendent?" "Do I avoid criticism of my principal and superintendent in public?" Material like this, which equates professionalism with acquiescence to administrative direction, is professional nonsense.

The second major divisive issue, teacher affiliation with labor, finds the NEA objecting on grounds that teachers should not have obligations to, or be formally affiliated with, any particular segment of the population. The AFT position is that affiliation does not compromise teachers but provides them with support needed to gain objectives.

The argument that teacher affiliation with national labor bodies compromises the teacher has been clearly repudiated by the test of experience and weight of authority. The affiliation dates back to 1916. If this affiliation tended to produce the dire consequences attributed to it, the evidence should have been forthcoming long ago. Although NEA literature calls attention to the evils of affiliation, it does not cite cases where affiliation compromised a group of teachers. The evils are always assumed, not demonstrated.

The strike by the UFT on November 7, 1960, in New York City, illustrates many of these points. Prior to this strike, there was not one single public statement of strike support from the AFL-CIO, either in New York or Washington. When it ended, the head of the Central Trades and Labor Council in New York City gave public assurances that there would not be another. The next day, these assurances were repudiated publicly by the president of the UFT.

The evidence is dubious for the common belief that the federation gets its militancy from the labor movement. More likely, militant teachers gravitate to the AFT; affiliation with labor is probably a result more than a cause of their greater militancy.

It is too early to predict the winner of the upcoming election. But, regardless of what organization, if any, wins the election, it will be a landmark in the history of American education. By accepting bona fide collective bargaining, however reluctantly and belatedly, the New York City Board of Education is making one of the most important contributions to education ever made by a board of education in this country. Soon, it will be up to the teachers of New York City to rise to the occasion. For better or for worse, they have an unprecedented opportunity to influence the course of American education in the 1960's. •

A By-Product of Metropolitan Life?

Desegregation: The Northern Problem

WILL MASLOW

In Teachers College Record

THE decision of the Supreme Court on public-school segregation invalidated statutes in 17 states that compelled segregation and in four other states and the District of Columbia that permitted it.

The decision, by necessary implication, also outlaws segregation practices in northern states stemming from deliberate action of public educational authorities. Court decisions are, of course, aimed only at segregation resulting from "the sanction of the law." The Supreme Court was under no necessity, therefore, to pass on or even to refer to segregation that results when a homogeneous racial population, concentrated in a particular neighborhood, attends an all-white or all-Negro public school in that neighborhood. This *de facto* segregation, arising from neighborhood patterns not created by law, is primarily, although not exclusively, a northern problem.

The black ghettos in northern metropolitan areas create school populations that for all practical purposes are segregated. In New York City, for example, there are 94 public elementary schools (of a 570 total) with Negro or Puerto Rican enrolments of 90 percent or more. Similar situations exist in numerous other northern cities.

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That the educational level of children in segregated schools is markedly below that of their white peers is a matter of common knowledge verified by many studies. School segregation is obviously not the only factor responsible for this educational retardation but it seems clear that it plays an important role.

Does the Constitution require an effort to eliminate such *de facto* segregation? Judicial opinions abound declaring that the equal protection clause of the Fourteenth Amendment does not "affirmatively command integration" and forbids only the use of governmental powers to enforce segregation. A sound opinion requires closer analysis.

It is hardly open to doubt that, in violation of the Constitution, a school may be segregated in other ways than by a state statute or school-board resolution barring admission to nonwhite children. Illegal segregation may be effectuated by gerrymandering a school

district or school attendance zones, by arbitrary site selection, by manipulating transfer policies, or by under-utilization or over-utilization of certain schools. It is immaterial that the word "race" or "Negro" is scrupulously avoided in official declarations. The crucial tests are motivation and effect. Nor must this constitutional right to attend nonsegregated schools necessarily have only a judicial remedy. The right may be affirmed and protected by administrative action of school authorities or legislative action of city councils.

In some circumstances, "culpable official inaction may also constitute a denial of equal protection." The recent case of *Taylor v. Board of Education of New Rochelle* is instructive. The court found that, beginning in 1930, the school board had gerrymandered district lines to confine Negro pupils within one school. Federal District Judge Kaufman, in a 48-page opinion, found that the New Rochelle school board had been motivated since 1949 by a desire to maintain the Lincoln school as a "racially segregated" school. Judge Kaufman directed the school board to submit within 80 days a "plan for desegregation" to begin no later than the 1961-1962 school year, marking the first time a northern school board was ordered to submit a segregation plan to a court.

Thus, the expanding concept of state action continues to develop. A school board does not immunize itself against judicial challenge merely by adopting a "neighborhood school policy," for, as Judge Kaufman held, "such a policy is not sacrosanct," and is "valid only insofar as it is operated within the confines established by the Constitution. It cannot be used as an instrument to confine Negroes within an area artificially delineated by official acts."

Boards of education may not, therefore, put the sole responsibility for segregated schools on residential patterns if they reinforce such patterns by their own actions or "culpable inaction." *Taylor v. New Rochelle* is a warning, as Judge Kaufman put it, that "compliance with the Supreme Court's edict was not to be less forthright in the North than in the South . . ."

As a step toward resolving the segregation problem, we have the forthright declaration of policy of the New York City Board of Education, announcing an intention to put into operation a plan to prevent further development of segregated schools and to integrate such existing schools as "quickly as practicable."

Such a declaration is only the first step toward a solution of the problem. A desegregation plan must be devised and put into operation. What are the essentials of such a plan?

One basic component is a realistic definition of segregation and integration. The prevailing southern view is that the admission of a handful of Negroes or even one to an all-white school desegregates

it. The New York City Board of Education classifies an elementary school as segregated if its Negro or Puerto Rican population is either 90 percent or higher or 10 percent or lower. These precise figures have no independent legal or even psychological authority, merely representing the Board's conclusion that to achieve integration school populations must be genuinely heterogeneous with substantial numbers of white and Negro children. This opposes the thinking that token admission of a few carefully selected Negro children to "white" schools establishes integration.

Devices to perpetuate segregation are numerous and often difficult to uncover. Most important is a deliberate drawing of district lines to segregate Negro pupils. This gerrymandering to promote or retain segregation is obviously illegal. But, it is not sufficient that district lines be drawn without considering the ethnic composition of schools. Indeed, considerations of learning, the prime function of schools, must be paramount to such matters of convenience as ease of access. Lines must be placed that will foster, not hinder, desegregation.

We must distinguish between a school board's right to use zoning lines to reduce segregation and its legal duty to do so. In the New Rochelle case, the New York State Commissioner of Education held that a school board was under no compulsion to "gerrymander" school districts to achieve integration. In three prior rulings, the Commissioner rejected attempts by parents of Negro children to compel school boards to reduce *de facto* segregation by rezoning school district lines.

THE "PRINCETON PLAN"

The "Princeton Plan" offers a relatively simple method of achieving integration in small towns, or even in larger areas, where a Negro area is relatively close to a school serving a white one. School authorities in Princeton, N.J., assigned all children in the first three grades to one school in a Negro area and the other grades to a school outside the area, thus achieving integration. This plan is also used in Benton Harbor, Mich., Willow Grove, Pa., and elsewhere.

If integration is to be achieved, school authorities must have up-to-date information about the racial and ethnic composition of their schools and the neighborhoods they serve. It is not necessary to determine the race or ethnic origin of any particular student; a school board needs only statistical data about the ethnic composition of the schools. Complete or scientific accuracy is not necessary, and borderline or doubtful cases can be placed in one category or another. Without such information, school authorities must rely on guessing, an unreliable procedure when large numbers are involved.

Shall school zoning lines, once drawn, be rigidly maintained? Educators are not in agreement. Some

feel that if children in a particular district are given permission to attend schools outside their district, white children will avail themselves of this to escape attendance at predominantly nonwhite schools.

New York City until recently maintained a strict policy compelling children to attend their neighborhood school. Similarly, the Pasadena, California, Board of Education, which has taken a firm stand against invasion of school zoning, has declared that it will not allow "practices by parents which alter the faithful racial representation of the geographical area served by each school."

On the other hand, Philadelphia has always had, and still maintains, the policy of allowing a child to attend any school in the city, provided that each school, after enrolling the children of its neighborhood, has room for others. The city's school authorities contend that this optional enrolment policy fosters rather than hinders integration, as has been charged.

Desegregation is only one part of the school board's task. Indeed, were it to stop at desegration, it would not perform its constitutional duty of equalizing educational opportunity for all its pupils. Children living in slums, with little or no parental supervision, moving frequently in the middle of school terms, with poor motivation and low educational aspiration, and occasionally speaking English poorly, require more than attendance at a theoretically integrated school to overcome such handicaps. The condition of physical facilities, expenditures of pupils, class size, caliber and experience of teachers, and the character of curriculums must also be equalized. With the above as functioning factors, the inequality between segregated and all-white schools is often flagrant.

Special and massive efforts are required to bridge the gap between the achievement levels of the Negro or Puerto Rican slum-dwelling child and more fortunate students. Can a board of education reduce this differential without waiting for the community to end the slums, the low incomes, the social disorganization, and the racial discrimination that create it?

Equalizing objective educational factors will not wipe out the enormous disability of living in a slum and in a society that still subjects the Negro to inferior status, an inferiority that he often accepts as his lot. But such efforts help considerably to fulfill the constitutional and moral mandate imposed on boards of education.

De facto segregation is not an inevitable by-product of metropolitan life. It can be attacked and, if not eliminated, at least reduced considerably. Segregated education is educationally undesirable. School authorities have, therefore, an educational as well as a moral and, in some situations, a legal obligation to do all within their power to achieve integration and to equalize educational opportunity for all the children entrusted to their care. •

Prospects and Questions

Team Teaching: A Review

STUART E. DEAN

In School Life

OF all the ideas to come out of the current reappraisal of the elementary school, team teaching is one of the fastest to capture both professional and public attention.

In the ordinary meaning of language, team teaching suggests merely a kind of cooperation among teachers. It is far more in the meaning now being given. It is a way of organizing a school, of utilizing staff, and of using space and equipment.

There are only a few definitions of team teaching available, and none of them say quite the same thing. Taken together, the definitions suggest that team teaching may have some answers for some questions and problems. In effect they suggest that team teaching can take various forms, but that whatever its variations, it is essentially a way of organizing the instructional program at either the elementary- or secondary-school level. Teams may work "vertically" through the school (at all grade levels in a single subject or closely related subjects); or they may work "horizontally" (at one grade level but in several subjects). For example, all teachers in the language arts may work as a team with all pupils from grades 7-12. Or, all teachers in grades 5-6 may work together with each teacher taking the chief responsibility for classes in his special field.

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Even a small team has a leader, and many large teams have a hierarchy of levels with different titles for its members, such as "team leader," "master teacher," "regular teacher," and "intern." Many teams also include nonprofessional people, such as aides and clerks to assist the teachers.

Team teaching is certainly more than a group of teachers amiably agreeing to work together. It is an almost unprecedented kind of unity: Members of the team plan together, collaborate constantly, communicate without restraint, and share sincerely and selflessly. Working together they can revise procedures and revamp programs to meet the educational needs of their pupils. In a sense, the movement may be considered something of a revolt against the organizational restrictions of the past and a sharp reminder that the purpose of

school administration is to serve the educational process, not control it.

EVALUATION

The team-teaching idea has been in practice for so short a time in so few communities that conclusive evidence of its effectiveness has not accumulated. The oldest project is only four years old. This is at the Franklin School in Lexington, Mass., sponsored by Harvard University's School and University Program for Research and Development.

It is from this project at Franklin that most of the evaluation of team teaching has come. An objective summary by the project's director, Dr. Robert H. Anderson, indicates that team teaching is not "disadvantageous" to children, and that its results warrant further experimentation and refinement of proceedings. As for its effects on pupils—in personality growth and in adjustment and achievement—Dr. Anderson thinks them "no less satisfactory" than effects in a traditional setting. He has found no evidence that children suffer emotionally or academically or in any way feel "lost" in the process. The reactions of the teachers have been favorable. And nearly all parents report that their children enjoy their team-taught school and benefit from it.

In due time, more bases for judging the worth of team teaching will be at hand. Present evaluation is almost entirely in the realm of personal opinion and speculation.

Opinions about team teaching are not sharply divided. Some of the proponents are as ready as the critics to point out practical problems and raise provocative questions; and many of the critics concede that team teaching promises much, at least in theory.

ADVANTAGES

The following are some of the advantages being claimed for team teaching:

It is good organization. As a plan of organizing for instruction, it preserves the virtue and avoids the weakness of both the selfcontained classroom and its opposite, departmentalized instruction. It makes it possible to have every subject taught by a specialist, yet it preserves the interrelatedness of subjects and learning. It makes the most strategic use of each teacher's knowledge and skill.

The pupil profits. Having the academic advantage of being taught each subject by a teacher strong in that subject, the pupil is more likely to find scholarship attractive and be challenged to work to capacity. His interests, abilities, and needs are more likely to be discovered when he is taught by two or more teachers working closely together. The flexible grouping and regrouping that characterizes many team-teaching programs provides more realistically for pupil differences than straight "ability" grouping. The quality of instruction that a pupil receives

during any one school year is not dependent on a single teacher.

The staff profits. There is more professional and personal stimulation for members of a teaching team than for a single teacher working in isolation. There is better communication, more motivation for continuous curriculum improvement, and more cooperative planning. The team places a premium on ability, skill, and exceptional leadership qualities, which encourages teachers to grow professionally.

The school profits. There is more opportunity for flexible schedules and efficient use of space, materials, and equipment that works to encourage the administration to respond to changing needs rather than to be restrictive. The team provides room for different levels of teaching ability, making it easier to set salaries according to professional skill and leadership and easier to provide inservice training for inexperienced teachers.

QUESTIONS

Among the many questions being raised concerning team teaching, the following are most frequent.

What are we talking about? Does not the present loose application of labels and terms lead to a possibility that the basic concepts of team teaching will be misused and abused? Does not a leap aboard the bandwagon now entail a risk of missing entirely team teaching's idealistic purposes until precise definition and full understanding are possible?

Are the assumptions sound? On what basis have we judged inadequate the present methods of school organization and instruction? Can we safely assume that all teachers are qualified by temperament and training to work effectively as members of a team? Is the theory valid that some things can be taught more efficiently in large groups? Are we certain that children learn more from a subject-matter specialist than from a generalist?

How do we surmount the practical difficulties? How can we get enough teachers specially trained in subject matter and team relationships? How will we meet the increased salary and operating costs? How serious are the limitations of our present school buildings for housing this sort of problem?

Could team teaching become form without substance? Does not history suggest that our schools have a tendency to become so preoccupied with innovations which make them the ends rather than the means they were conceived to be? Why not evaluate team teaching on the basis of its contributions to classroom practice rather than on administrative efficiency, popular expediency, or glamor given by publicity? Is there not an ever-present danger that we will overemphasize organization and, in so doing, distort our sense of the educational values of the elementary school?

1961

When Disaster Strikes

A Refuge among the Ruins

In Overview

EVERY year about 400 to 500 natural disasters – floods, hurricanes, tornadoes, forest fires, blizzards–ravage communities in the United States. No section of the country is free of the danger.

The schools are in a key position during these disasters. Reports of major disaster operations show that school facilities and personnel are utilized in mass shelter, feeding, and medical care programs. But, despite the recognized responsibility of schools, many administrators have done nothing about preparing for such an eventuality.

A survey by the George Peabody College for Teachers reveals that few county or large-city school systems have disaster-preparedness plans. Moreover, fewer than half the state departments of education bother with potential school disasters other than fire. Even in those states which have had tragic experience, schoolmen appear to believe, according to the Peabody report, that disaster planning is a problem for local government and not for the school.

That every educational institution should have a disaster plan appears obvious. An abundance of literature on planning is available from the U.S. Office of Education, the Office of Civil and Defense Mobilization, and the American Red Cross. Adoption of these plans will vary with the location, size, facilities, and personnel of each school. But the *need* for adoption does not vary.

To learn from those experienced with school use during a disaster, consider Galveston County, Texas. Major disasters have struck this Gulf Coast area on the average of once every other year for the past 14 years.

For many years, Galveston tradition dictated that publicly-owned buildings be opened during hurricane storm warnings so that citizens could find shelter. The City Hall, County Court House, and City Auditorium were used, although Red Cross surveys showed that feeding, medical-nursing, sleeping, and toilet facilities were inadequate in most of these buildings.

George K. Graeber, chairman of the Galveston County Red Cross Chapter, explains that, "As time

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went on, more people began to go to the schools in disasters, having discovered that school plumbing didn't break down, that a kitchen was available for preparing infant formulas, and that there was a place to get into a supine position—a body was not forced to sleep jacknifed across a row of uncompromising auditorium seats."

Over the years, discussions have been held between the Red Cross and district school superintendents throughout the county, and informal agreements have been reached.

These discussions and unwritten agreements have resulted in Galveston's version of a "shelter management team" consisting of: a shelter manager (usually the school's principal) with "ultimate authority and responsibility" of the shelter operation; a communicator to answer phones and operate the two-way, citizens-band radio; a driver with a vehicle capable of traveling through a three-foot depth of water; a registered nurse; a cook in charge of the cafeteria; and a policeman to patrol the building.

Galveston's experience has shown that the best laid plans can bog down over minor details. One problem which came up was simply "how to get in"—who had the keys and responsibility to unlock buildings. This was solved by giving the responsibility to school principals and janitors.

In Los Angeles, top school officials have also worked closely with the Red Cross on the care of civilians in any disaster. Their plans were spelled out in a 1958 bulletin to all school principals and junior-college directors.

In the Los Angeles plan, a school administrator acts as chief of the school division in each of the 35 Los Angeles civil defense districts. A school principal will coordinate the welfare center, which serves as the administrative headquarters of the district's evacuation and shelter division. School safety regulations also require that one-third of all teachers, one-fourth of all classified personnel, and all bus drivers have current Red Cross first-aid certificates.

MOST LIKELY DISASTER

The nature of the disaster most likely to occur in an area also affects the type of local disaster plan needed. Forest fires are common in the Los Angeles area. During a recent fire in the Malibu section, one school served as a disaster shelter, feeding and caring for 325 people for a period of five days. Other schools were not affected, as this was a localized disaster.

In Dade County (Miami), Florida, hurricanes are a common local disaster. The Dade County school's disaster plan is similar to Los Angeles but has specific adaptations in response to the behavior of hurricanes. Officials select as shelters only those schools (or parts of a school) without large expanses of glass but with interior corridors. Also, instead of opening only one or two shelters, as in Los Angeles,

all schools designated as shelters are opened in Dade County when a hurricane warning is issued.

Since no one can predict when disaster will strike, plans must be flexible enough to work even when schools are closed. Last spring, while schools were closed for vacation, the Cedar River flooded Cedar Rapids, Iowa. Two schools were used as mass shelters with principals, teachers, nurses, janitors, and cafeteria workers voluntarily serving for the four-day emergency. This and other experiences—notably in the Worcester, Massachusetts, tornado of 1956—bear out the theory that school personnel prefer to cope with an emergency themselves rather than have "outsiders" come in to direct operations in "their school."

As President Kennedy said in a telecast last July 25, "We have another sober responsibility: to recognize the possibility of nuclear war in the missile age. Without our citizens knowing what they should do and where they should go if bombs begin to fall would be a failure of responsibility . . . In event of attack, the lives of those families which are not hit in a nuclear blast and fire can still be saved, if they can be warned to take shelter, and if that shelter is available."

This is a real challenge to every educational executive. In most communities the shelter is available—it's the school. It is for school people, working with other public officials, to develop the right disaster plan for their community.

"The time to start," President Kennedy said, "is now." •

Disasters and Tension

• There's a moral somewhere in the story of the Florida resident who had ordered a new barometer. When it came in the mail, he opened it, only to find that the instrument registered "Hurricane." He shook it, even turned it upside down, but everything failed to make it act normally. This incensed him so that he sat down and wrote a letter of complaint to the store. He took the letter to the post office, some miles away. When he returned he found that his house and the new barometer had been blown away.—From *North Carolina Education.*

• You can't stop trouble from coming, but you don't have to give it a chair to sit on.—From *Lexington, Ky., Kiwanian.*

• "People seem so worried these days that they have forgotten how to relax," said the college professor. "Why, sometimes as I look around the room while teaching, I can see hardly anyone napping."

Education of the Majority

MAURICE J. THOMAS

In School and Society

EDUCATION in our governmental system has dual objectives: to develop highly competent citizens and to provide a strong educational program for all youth. We believe that each student should receive quality education to develop to the highest potential his talents, capacity, interest, and the best interests of the nation.

The philosophical base for this kind of education was laid by our early national leaders. Today there are disturbing signs that we are failing to appreciate and sustain the early concepts of our responsibility. It would appear that we are giving greater emphasis to quality education for the few, looking with more favor on academic enrichment of the talented, and minimizing citizenship training of the total population.

Education is a governmental function, mandated historically, and is the obligation of all in a democratic society—both to support and to receive. The matter of how to fulfill this responsibility has become confused. We can justify compulsory education and compulsory taxation for the purpose of preserving and furthering our system of government. It is more difficult to defend the invasion of a citizen's freedom of action and the expenditure of taxes to further the education of the neighbor's children to enhance their personal advancement.

Change is a pattern of all cultures. But change must have purpose and deliberate direction in relation to values and accepted goals, and change must be consistent with national democratic ideals. Shifting emphasis, based on altered circumstances, is the right and the obligation of each generation. The acceptance and/or the development of the circumstances should come, and be accepted, only in terms of the values transmitted, analyzed, and weighed in relation to alternative courses of action and a decision arrived at as to which will more readily and justifiably pro-

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mote the general welfare. Each era has a right and a duty to appraise handed-down arrangements in the light of new knowledge and insights.

Education is constantly in the maelstrom of evaluation, as it should be. Too frequently criticisms are made not to improve, but to alter basically existing values, to reduce costs, or to deny education to someone who fails to come up to "tests" as determined by some critic.

It is right and proper that our society be concerned and take action to insure the highest training possible for those exceptionally able. This develops from the principle we have accepted that each has a right to the best education in terms of his talent and capacity. But we must not forget that this is not the exclusive right of the academically gifted. It is essential—even if it is more costly—not to sacrifice the great majority by having them subsidize the "exceptional," or the minority. After all, every child is exceptional.

There is a tendency to downgrade those of average or below-average ability, with some—even in the education profession—saying, "Drop them from school." They contend that schools exist only for transmission of academic learning. This contention is false. To train for citizenship is the first responsibility.

It is naive to assume that youths of 16, 17, or 18 years are welcome as workers in our economy. If these young people are not wanted in our schools, they are wanted even less by our economic structure. If ignored or neglected by our schools, they will be relegated to menial tasks, undirected, uninspired, and lost.

Furthermore, if rigid academic standards are applied and we "rid ourselves" of educative responsibility to those less gifted, some other force in our culture will take over the educational function for these youths—an extreme danger for citizenship training. Already too many baleful influences are at work—conditioning the young—to allocate deliberately this task to the untrained, misinformed, and casual "teacher." Anyone becomes a teacher when he directs the activities of others; even the casual associate in leisure and play or the employer is an instructor. Educators and school boards should give this problem serious consideration before taking the easy way out.

COMMUNITY RELATIONSHIPS

Education exists within a community setting and directly or indirectly affects every person residing therein. The relationship of education to the community is homologous to the community's setting within a geographical area and is dependent on materials and services from some remote place as well as from communities adjacent. Just as a community is not an entity unto itself, our schools do not exist in a vacuum unconcerned and unrelated to the people whom they

serve and by whom they are supported.

The strength of education as we know it today, as well as many of its weaknesses, lies within the community pattern where our extensive free public educational system was born. The variety of educational experimentation and the development of more efficient practices and organization are the fruits of varied community study and solutions of community problems. There must be no conflict between education of a free people in a democracy and full development of each individual's potentialities.

The challenge to education and community leaders to build on the foundations of the past in making more effective the interplay between the community and the school is great. There are few signposts along the way, and there is far more involved than an "effective academic program." Total child growth and development should be the true objectives.

HUMAN RELATIONS

It is in this field of human relationships that society and its institutions break down. The literature in this area is rich; but effective and workable solutions are rare, and few prove lasting. It is more difficult for the "best and wisest" to affect proper relationships between men who have the capacity to think than it is to make progress in harnessing the forces of nature and natural resources for universal benefits. This is, of course, one of the weaknesses of individuality in a society. It is in this field that education can make its greatest contribution in the future. The rapid accumulation of scientific knowledge, the practical application of inventions, and the use to which all natural resources are being put insure an ever-rising standard for our material wants.

The most pressing and crying need of society is in the field of human relations, for it is at this crucial point that many of our leading citizens fail to understand their role in American democracy and the part they should play in bulwarking and improving our educational system. This problem must be faced; and personal, racial, economic, religious, and nationalistic clashes must be resolved by means that will not destroy the high standards that our scientific and materialistic ingenuity have made possible.

Education must give thoughtful attention to creating a desire and developing a capacity on the part of all to resolve the conflicts without passion, but with reason and fairness to all concerned and in the interest of society in general.

As all classroom teachers know, teaching is easy and highly satisfying when the student is bright, eager, and industrious. It is more difficult to motivate, create interest, and train the less able or the unwilling. But formal agents of the culture in our democratic society—those in the educational profession—have an obligation to all. •

1961

Three Useful Methods

When Teachers Help Plan the Curriculum

JOHN A. DEWAR

In Educational Leadership

INVOLVING teachers in curriculum planning is an essential aspect of a good school and a most rewarding enterprise. A teacher involved in planning the curriculum for students he is to teach has a personal stake in the matter and usually does a better teaching job.

There are numerous ways of involving teachers in curriculum planning. Three ways – summer workshops, year-round workshops, and classroom research (sometimes called "action research")–have been found useful through this writer's experience in one school district.

With the summer workshop technique, the board of education finances a two-week workshop for teachers each year following the close of school. Attendance is on a voluntary basis and teachers may secure college credit or board-of-education credit for salary advancement. Participating teachers are asked to make three suggestions as to the curriculum area in which they prefer to concentrate. When an area is selected, an expert in the field is secured to consult with teachers and administrators to plan and conduct the workshop.

In past years, successful summer workshops were completed in the areas of arithmetic, art, language arts, and the gifted child. In some cases there were no visible, concrete outcomes resulting, but those working with teachers saw them benefit through the use of modern approaches to teaching and improved techniques. Another benefit is an increased awareness for workshop participants of the importance of areas of learning and their relationship to the total program.

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With a year-round workshop, the school district supports teacher participation by providing planned time during the school year for teachers to work on curriculum. Teachers report to their assignment one or two weeks prior to school opening and meet several times on a district-wide basis by grade groups. Projects for the year are discussed and decided on at these early meetings. Throughout the school year the grade groups meet at least once a month to work together. School is dismissed one-half day per month for this purpose.

To involve teachers in overall curriculum planning, interest groups were used, meeting on a basis similar to the described grade groups. These interest groups were made up of teachers across grade-level lines working in a curriculum area of mutual interest.

Curriculums of the social studies, writing, spelling, reading, arithmetic, science, kindergarten, physical education, and music all have had the benefit of teacher planning. Areas such as classroom control and reporting to parents have also had thorough discussion and planning by means of the year-round workshop.

The sixth-grade social studies program has been completely revised—the idea and the revision resulting directly from teacher interest, initiative, and planning.

Through these year-round workshop sessions, other curriculum areas have had benefit of revision as teachers have seen the need in these areas and initiated action.

Every teacher in the district is encouraged to carry on classroom research (action research) in various areas of learning. This activity usually takes a form of simple research in the techniques of teaching in a curriculum area. The results are reported to the appropriate grade group and other interested groups. Some of the benefits include improved classroom climate, improved teaching of spelling and writing, plus intangible gains to the teacher and the students that is evident to a visitor.

There are certain criterions which should be present if teacher participation in curriculum planning is to be meaningful and effective.

The following list is neither exhaustive nor exclusive, but for the most part, if these conditions are present, creative curriculum work can take place:

There must be time provided for teachers to work.

The administration must encourage teachers to carry on curriculum work.

The administration must give guidance to work in progress.

The administration must recognize and give consideration to the work teachers produce.

The administration should adopt and implement effective and appropriate curriculum revisions.

The teachers must feel free and should be encouraged to conduct experimentation, either in their own classes or district-wide.

In the school district described here, an administrative team including the superintendent, the curriculum coordinator, and the several building principals met once a week to coordinate curriculum planning work. Thus, all administrators were kept informed and could encourage and guide teachers in the work they were doing at the time. This was most important, as the administration must be enlightened to permit and encourage curriculum work to proceed. The attitude and initiative of the teachers will reflect the attitude and initiative of the administrator. •

An Economic Battle

The Root of Opposition to Federal Support

JOHN MCCORMALLY

In Washington Education

YOUNG America returned to school in September against a background of loud and bitter bickering over the future of its schools.

The fight over federal aid to legislation is, on the surface, a political fight, with spicy dashes of racial prejudices and religious bitterness thrown in.

Under the surface, it is an economic battle—one of the oldest and hardest-fought in this country. It falls in the classic pattern of historic battles between the *haves* and *have nots*.

It is not popular—or even polite—to describe it in these terms. We are all brainwashed from childhood to pretend that the United States has no classes or masses, no sharp and fundamental disagreement between its *have* minority and *have-not* majority.

We all are supposed to be of a mold—good, purt, freshly-scrubbed Americans, believing that capitalism and free enterprise came down to us on stone tablets from the mountain, and that democracy was devised by angels.

The truth of the matter is that the minority, who are the elite financially and culturally, do not trust democracy very far. They tremble—and with good reason—at what would happen to their wealth and position if the masses could bring the vote of the majority into full play. And they have spent the better part of 200 years devising ploys (such as the House Rules Committee) to thwart the will of the majority, all the while paying lip-service to the word "democracy."

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And the majority, while it admits to something patriotic in the word "capitalism," particularly since it has become an antonym of "communism," nevertheless exerts most of its political energy—at least since the last century—controlling, curtailing, and transforming capitalism into some forms of socialism.

The first and greatest of these social programs—of channeling the nation's wealth to benefit the masses—is the public-school system.

But free public education (radical as the idea was and still is to some untainted patriots) was for a long time no great economic threat. As long as it remained local, it could be controlled. The masses

might fill the schools with their children, but the community leaders—its business and professional men—those concerned with preserving the community's wealth, controlled the schools. And they kept them inexpensive.

This meant in most cases keeping them inadequate and crowded, with vastly underpaid and sadly undereducated and underinspired teachers. But it was cheap.

But education feeds on itself. Two generations ago, when utterly uneducated parents sent their children to school, they were amazed, overjoyed, and endlessly grateful for the one-room building and $30 teachers which the local landowners magnaminously provided.

A generation ago, more parents had finished high school, some had gone to college, and they began to insist, for their children, on fireproof buildings, teachers with degrees, and public high schools big enough for everyone.

This generation, with vastly improved tastes, wants pastel walls and multipurpose rooms, exceptional child programs, teaching of foreign language, teachers with two degrees, and public colleges big enough for everyone. This is not cheap. So the fight between the people with wealth and the people with kids has developed and grown. And each time wealth won—digging in its heels and throwing up a wall against more spending—the parents (ably led by professional educators) simply went around the wall and began the fight all over again, in a larger arena.

When district funds no longer sufficed because some districts were poor in property and rich in kids, the fight was made for county funds—for funneling wealth from rich districts to poor ones. The next move was for state funds—to funnel wealth from rich counties into poor ones. And now the battle is for federal funds—for funneling funds from rich states into poor ones.

But the change is more than geographic; the method of taxation changed, too. The school district is limited to taxing real estate, no longer necessarily a true measure of wealth. But state and nation, with their sales and income taxes, are in much better position to "stick" the rich.

So the battle goes on. This year, traditional foes of federal aid, such as the National Association of Manufacturers and National Chamber of Commerce, have been helped by such strange bedfellows as J. Strom Thurmond, who is afraid the Negroes will get in, and Cardinal Spellman, who is afraid the Catholics will be left out.

Familiar cries of combat warn of the dangers of federal control, although numbers increase who refuse to be terrified of their own government.

The real battle involves no such principles. It is simply, unglamorously, a matter of money. That harsh, impolite, economic truth is at the root of the opposition to federal aid to schools. •

1961

Three Ways in Which We Are Alike

Education Problems Common to Great Britain and the United States

WARREN A. KETCHAM

In The University of Michigan School of Education Bulletin

THERE is a remarkable similarity among educational problems facing Great Britain and the United States and the desperate search for solutions taking place in both nations.

It is not recognized generally that the two nations are facing common educational problems, probably because the problems do not rise *directly* from the very different educational organizations and practices. The problems rise *indirectly* from common philosophical and social ideologies.

The common ideologies are frequently overlooked when undue emphasis is placed on the more obvious contrast in political and financial organizations and practices of the two nations. In government as in education, it is easy to forget that different solutions to the same problem may be equally logical but equally ineffective. Consequently, the following discussion is designed to divert attention from marked differences and to direct attention to critical common problems for which more adequate solutions will come through cooperation.

The three problems considered have been selected because they are the focal points of discussion in lay, professional, and legislative groups in both Great Britain and the United States. They are problems for which educational leaders in both countries are urging more research, hoping that solutions will be based more frequently on evidence rather than on compromises between divergent, and often fallacious, opinions about education.

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HOMOGENEOUS GROUPING

The first problem is: *Does homogeneous grouping in elementary and secondary schools increase academic achievement?*

It is difficult to ascertain the strength of trends regarding ability grouping in schools in either country. It is safe to say that the trend in each country is in an opposite direction, especially at the elementary level.

In the United States homogeneous grouping was practiced rather widely, especially in large city sys-

tems, in the 1920's. The results were disappointing to parents, teachers, and administrators. As a result the practice had almost disappeared by the late 1930's. New generations of parents and teachers have failed to review experiences of past generations and the result is a new wave of enthusiasm for homogeneous grouping in both elementary and secondary schools in the United States.

In Britain, the 1944 Education Act made homogeneous grouping or "streaming" mandatory. After 15 years, disappointment with results is appearing among British teachers and parents. Evidence which questions the desirability of the practice is increasing.

In Great Britain, the importance of homogeneous grouping to the British policy of limited education for the many and extended, complete education for the few frequently goes unrecognized. The practice provides the best means of eliminating large numbers of pupils between 11 and 18 years of age from educational routes to a university. Eighty percent of the school children are eliminated at age 11, 95 percent have been eliminated by the time they are 18.

Grouping of children at the secondary level in Britain has recently undergone some change by virtue of the appearance of the "comprehensive secondary school" in many communities. Instead of grouping secondary pupils for enrolment in distinct schools (grammar, secondary-modern, and schools for the educationally subnormal), in some communities pupils of all ability levels go to a "comprehensive secondary school" where they take separate programs of study, similar to the college preparatory, commercial, and general curriculums in vogue in the United States in early decades of this century.

Under the conditions mentioned, there is a growing tendency to reexamine the validity of the procedure which, at age 11, groups students according to ability for the different programs of study.

What does the future hold for homogeneous grouping? Results of the practice are overshadowed in both countries by beliefs and feelings. Teachers in both countries prefer generally to teach the brightest pupils. The parents of bright children usually favor ability grouping; the parents of children placed in groups for the less bright do not. When the brightest children in a school in either country are grouped together they are invariably the highest achievers in the school, by any standards. Grouping is then interpreted to be the cause of the high achievement.

Actually, grouping has not advanced achievement of high-ability pupils, but many people looking at the impressive superiority are immediately convinced that grouping is responsible.

There is one promising element in the confusion evident in both countries. A large number of people in Britain and the United States are insisting on better evidence re-

garding the effect of the practice of homogeneous grouping on children's school achievement.

COMPULSORY EDUCATION

The second problem: *Should compulsory education for all be extended to age 18?* Since the end of World War II, the British have been mindful of raising the compulsory school attendance age. Presently, the legal school-leaving age is 15. The advance of automation and the resultant loss in effectiveness of the apprentice system have reduced employment possibilities for young people. To this economic necessity must be added a growing need for better educated workers and technicians.

A longer school life appears to be a wise move. But the British know that simply raising the legal age for leaving school is not enough. They realize that adolescents want an education which they see personally related to their needs and purposes. Any modifications of present practices will have to be away from the heavy emphasis on academic courses in curriculums of all secondary schools. Some insight into what the British are considering is provided by the Crowther Report, which states that "We are very far from decrying the academic tradition which inspires and is embodied in our grammar schools and universities . . . It is not, however, the only road by which good minds can travel."

In the United States, there is a growing trend among secondary schools toward a return to more academic courses for all students, with curtailment of life-adjustment, core, industrial-arts and fine-arts courses as requirements for traditional and scholarly subjects increase. This is frequently praised as a return to the only proper purpose of education—the training of the intellect. If the drop-out rate increases as a result, it is only for the better, the reasoning goes. Unworthy students will be eliminated and teachers will be left free to concentrate on promising and worthy students.

This trend and the underlying reasoning ignores the evidence that neither the particular kinds of courses taken in high school, the size of the high school, nor the question of the secondary school being public or private are closely related to students' college success.

Much more related to success in college, and success after school, are the student's intellectual maturity, his personal-social maturity, and the sincerity and depth of purposes motivating him.

Right now, American secondary teachers could assist British secondary teachers in efforts to find ways to provide for larger numbers of students. In Britain and the United States many able secondary students will reject the opportunity to attend school beyond the legal leaving age if the curriculum is primarily academic. For 25 years American high schools have been experimenting with curriculums de-

signed to meet the needs and purposes of all adolescents. Efforts have not always been successful or even praiseworthy, but much of real value has been learned.

The statement, "Secondary education is, then, in our view essentially the education of the adolescent," has been endorsed in Britain. Only American secondary schools have attempted to show how that statement could become a reality. It is a most difficult task and, under attack from all sides, the corps of American secondary-school teachers has lost heart. In some communities, it is in full retreat from an enviable position of imminent success.

The chief reason for the loss of heart is that the American high school was expected to do for 66 percent of American youth what the British grammar school does for the brightest 20 percent of British youth. Still, most British teachers and citizens agree that there are no important differences in achievement between the brightest secondary students in either country.

COLLEGE BOUND

The third problem is: *Who should go to college?*

In Great Britain, the privilege of attending a university is limited to 5 percent of the population. In America, a college or university education is provided for roughly six times that percentage of the population. Evidence indicates that this is done w i t h o u t jeopardizing achievement of the bright students. This and other basic differences between British and American higher-education institutions are seldom recognized.

The British university is concerned primarily with mastery of content in a few scholarly subjects, usually three, sometimes only one. University studies do not prepare students for a profession. Baccalaureate degrees are awarded at the end of three years of study; professional training follows and is acquired by working in industry, hospitals, government agency, or some other such habitat of the profession concerned. Teacher training colleges and technical colleges award diplomas and certificates, but not degrees. Neither universities nor colleges in Great Britain are concerned with anything similar to what is known as a liberal arts education in the United States.

In both nations, there is a rapidly growing demand for places for more students in colleges and universities—a demand for an increase in opportunities for a larger percentage of young people as well as the demand for an increase in real numbers.

These three educational problems common to the two countries are very important. Recognition and understanding of similarities and differences between British and American educators are vital. The future of education in Great Britain and the United States depends to a large extent on the way that these problems are understood and met. •

1961

"Lap-Welds Theory with Practice"

What Is Cooperative Education?

RALPH W. TYLER and ANNICE L. MILLS

In Report on Cooperative Education

LAST November, a traveler in this country could have met college students such as these:

A young man working at the Republic Aviation Company, who is an engineering student at the University of Detroit. An editorial assistant at South-Western Publishing Company who is a business administration student at the University of Cincinnati. A student of General Motors Institute experimenting in a sound laboratory at the Frigidaire Division of General Motors. A history major at Antioch College taking down news stories in the Associated Press office in Washington.

All were enrolled college students working for degrees. They were not then attending classes but reporting for work as any other employe, and earning full wages while meeting a degree requirement. All are on a "cooperative education" program. They must build up a satisfactory work record, as well as pass their courses, in order to graduate.

Cooperative education originated in 1906 from an idea by Dean Herman Schneider of the College of Engineering at the University of Cincinnati. His plan was simple, being based on a belief that education would be richer and more meaningful if college students could spend a portion of time working, promptly applying knowledge and theory from school to practical work situations. Dean Schneider called his plan "cooperative education" because it depends on the cooperation of industry.

Charles F. Kettering, director of research for General Motors for many years, was a close friend of Dean Schneider and a friend to his plan. Kettering helped establish the General Motors Institute as a cooperative school, and employed cooperative students at General Motors and in his own laboratories. In 1957 Kettering wrote, "What gives cooperative education its strength is that it lap-welds theory from the classroom with practice on the job. It creates a weld that is much stronger than the butt-welding of a college degree followed by

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employment, the two touching at only one line of contact."

Dean Schneider started with a group of 27 engineering students, who spent two weeks in class then two weeks at work. Other educational institutions saw the potential of the program, and it was introduced at Northeastern University in 1909, at the University of Detroit in 1911, at Drexel Institute of Technology in 1920, and for the first time at a liberal-arts college at Antioch in 1921. Today, some or all students in 63 colleges and universities are on the cooperative plan, majoring in engineering, business administration, the liberal arts, and other fields.

Cooperative-education programs can include all or some of the students. At some institutions, every enrolled student must participate in the work periods. Frequently, the program is offered in some, but not all, departments. At other institutions it may be a student-option plan or an honors program for which a student must be selected. Usually the students must spend one or two full years of course study before starting a cooperative job, but in some cases even first-year students start the alternation of work and study.

The question is often asked whether students have difficulty in shifting attention back and forth from study to work. The Study committee found that neither faculty nor students think this a problem. Nor do the students lose out on extracurricular activities. Three members of the 1959 University of Detroit varsity football team were cooperative engineering students.

What is the aim of the students in spacing out their studies with jobs, and why do college and universities offer this program? The plan offers definite educational advantages:

By coordinating work experience and campus program, theory and practice are more integrated and students find greater meaning in their studies.

Coordinating work and study increases student motivation. Students see connections between the jobs they hold and what they learn on campus.

Work experience contributes to a greater sense of responsibility for the students' own efforts, greater dependence on their own judgments, and a corresponding development of maturity.

Work experience involves students with co-workers from a variety of backgrounds. Because success in these jobs requires constructive relationships with colleagues, most cooperative-education students develop greater understanding of other people and greater skills in human relations.

Cooperative education helps markedly to orient students to the world of work. It is a realistic "career-tryout" at a time when a final decision need not be made, permitting a change in academic and vocational plans with the advantage of having experience in the work world. •

How Shall We Evaluate It?

Airborne Television and the Technology of Education

ROBERT W. KILBOURN

In Audiovisual Communication Review

THE Midwest Program on Airborne Television Instruction (MPATI) may be considered as a case study in the application of technology to educational processes. The MPATI telecasts year-long course sequences for use at the elementary, secondary, and college levels. The telecasts are made from aircraft TV stations flying over Indiana with a six-state reception area, including parts of Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin. There is a potential audience of 5 million students in 13,000 schools.

The program proposals, in effect, are inventions of human-machine systems designed to deal with certain realms of educational problems. The disturbing effects of the program on the profession have been experienced before and will be experienced again whenever innovations are introduced.

The MPATI airborne television project has been underway for several months, telecasting programs to schools, and it is appropriate now to examine some of the issues of programing, certain economic items, and ideas that relate to the development of technological systems for education.

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The full schedule of telecasts, now being shown, include 28 courses on a 40-hour weekly schedule: elementary school, 16½ hours; secondary, 16½ hours; college, 7 hours. Most of these courses are presented within the framework of a teacher-on-screen lecture and demonstration.

This lecture-demonstration format provides us with the first question concerning the relationship of the profession to the program. What is expected of the classroom teacher using the programs? Clearly, he must follow the lead of the television teacher if the programs are to achieve the desired effect. In one sense, the classroom teacher is relieved of some burdens of transmitting information. In another, he may feel compelled to go beyond the television teacher with more complex presentations of information. The problems of individual differences, discipline, and the

social structure of the learning environment remain for the classroom teacher.

To assert that the beginning MPATI programs do not adequately encourage significant learning by individuals turns the problem back to the profession for reconsideration. There is in current classroom practices a high frequency of just the lecture-demonstration form of presentation which MPATI transmits. This leads us back to a concern for the adequacy of our prevailing practice.

Neither MPATI programing nor conventional classroom practice appears supported by an adequate conception of the role of individual learners. We seldom recognize that individuals select from the experience they encounter just what they will learn. Equating "what is presented" with "what is learned" is not an assumption unique to television. Too often we view students as "note-takers" and information-feedback mechanisms.

We seem to be deep in the mire of dealing with individual learning framed as a problem of controlling masses of individuals. This dilemma follows logically from the attempted social revolution of education for everyone. We have not, however, achieved the concomitant revolution within educational institutions that would build schools for everyone.

Education for everyone may not be realized until we design the technological tools that will help us produce it. Today, we have a rapidly developing technology of information-handling that may be used to multiply the efforts of our teachers.

With some fear, we think of the ways in which technology of information-handling has already bypassed the schools in an effort to achieve direct contact with individuals. Commercial television in recent years has continued the high art of documentary programing to an extent that these programs are often a better source of information than any but the most scholarly realms within schools. Technological effects are also evident when children enter kindergarten after several years of television viewing.

ZERO EQUALS ZERO

It is important that the profession ask the Midwest Airborne Program to help it move toward developing systems of educational technology. It will be of no help if the MPATI program of evaluation only compares transmission efficiencies of conventional teaching and MPATI teaching. The lecture-demonstration is probably inadequate whether on television or by classroom teachers. We may reason that zero equals zero without regard for the medium.

The lecture-demonstration format usually transmits ready-made generalizations to students, with effectiveness measured by student accuracy in feeding back on achievement tests answers they have been given previously. Can we not develop a framework which

will give students the raw material to encourage individual discovery and development of generalizations?

MPATI programing appears to mirror one of the least effective of our present practices rather than the best we can achieve. Does this mean that our new educational technology will mass produce the commonplace and mediocre? Will the profession fumble the opportunity to produce excellence?

A real danger of MPATI programing, and all educational television programing, may be a premature hardening of conceptions of the medium. We have seen this in the conception of the instructional film as a "textbook with sound and pictures." This rigidity appears also in textbooks which have most of the life and controversy filtered out.

One viewpoint maintains that television for education has limitations of both an economic and technical nature. Our present operations are not close to either limitation. Consider the possibilities if we think of educational television as a medium to communicate directly with students in their homes rather than in school. Could the profession create programs of learning that would compete successfully for the attention of the noncaptive student audience? Could we face the prospect that educational television may not be a classroom medium except in an economy of scarcity, or in the early stages of development?

Of several issues relating to the economies of the television medium and the professional quality of programing, one is an old story in audiovisual educations: too much money spent for technical facilities and too little for development of programing. Motion picture projectors have long gathered dust in school closets because budgets ruled out purchase or rental of films.

In television, tremendous sums have been spent for videotape facilities that are not significant improvements over live programing. We still have with us an assumption that the *medium* is "magic" by itself without regard for the quality of program it transmits. The medium itself is nothing. The qualities of potential learning are determined by the decisions of men —both technical and professional men.

According to financial estimates, the total cost of all aspects of MPATI operation will amount to $7,750,000 for last summer's testing period and operation for the 1961-62 school year. If the program is promoted on the basis of economy a complete analysis must include an evaluation of quality of learning. The measurement of quality of learning is essential to developing a much needed theory of educational productivity. Even if the economic evaluation of MPATI shows a great saving in money and human effort, we ought not to feel satisfied unless the quality of learning encouraged is worthwhile. •

Recent Research on the Subject

Mathematics in the Secondary School

THEODORE E. KELLOGG and DONOVAN A. JOHNSON

In Review of Educational Research

DURING the years 1957-1960, a time of ferment in mathematics education, a variety of experiments with new curriculums were conducted at local, state, and national levels. In designing and implementing new curriculums and new approaches, it is vital that results from research be considered. The following will be concerned with describing some of the research projects related to experimental curriculums and the current status of teaching in secondary-school mathematics.

A survey by Luther Shetler examined the aims, curriculum, methods, and evaluation in mathematics teaching to determine how closely they agreed with research results and proposals. Disagreement between expert opinion and practices in classroom methods and evaluation was revealed. It was found that the teachers consistently following recommended practices are those who spend most of the school day teaching mathematics and those who have professional assistance in teaching.

In a related study, Clarence Diebel considered the influence of the evaluative criterions of the cooperative study of secondary schools in 57 Oregon schools. This study indicated that the recommendations are sporadically implemented.

One way to study the mathematics curriculum is to analyze textbooks. An analysis of 627 secondary mathematics texts by Joseph Izzo to determine trends in the use of graphical material revealed increased attention to graphing, especially in connection with locus and analytic geometry in plane geometry texts.

Similarly, Nageswari Rajaratnam studied 10 elementary algebra texts to relate the development of the concepts of variable, function, equation, and equality with the work of mathematicians and logicians. She observed new ideas mixed with outworn and erroneous ideas and terminology.

A method of evaluating curriculum effectiveness is to consider its contribution to success in college. By this approach, Frances Knights analyzed a test given to

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entering college freshmen to determine their preparation for analytic geometry. Using these scores as predictors of success in analytic geometry, Knights showed that students need more skill in problem solving, more experience in applying learning, and more understanding of definitions, relationships, and symbols to be successful in analytic geometry.

EVALUATING CONTENT

Since a variety of new content is being brought into the mathematics curriculum, the contributions of both the new and the traditional topics need to be evaluated. We have little evidence with which to defend either the old or the new.

One curriculum recommendation frequently made is that courses should be functional. Results of an investigation by William Bush failed to support the functional approach. The investigation revealed that students with two years of formal mathematics were superior in every category tested to students experiencing the functional approach.

The success of curriculum proposals depends greatly on the attitudes of teachers toward the new ideas and their competence to teach them. Daniel Spillane studied the attitudes of Pennsylvania mathematics teachers toward the inclusion of analytic geometry, calculus, and statistics in the high-school program, and considered the teachers' competence to teach these subjects. He found that teachers favor these topics in high school and feel generally competent to teach these subjects. Younger teachers and those who felt competent to teach the subjects were more favorably inclined toward them.

The number of experimental mathematics curriculums continues to grow, and projects that have been underway for some time continue experimentation. No experimental project has reported data adequate to permit evaluation of its effectiveness.

To anyone facing the difficult task of evaluating a new curriculum, a report by J. Dan Hull and others on a conference sponsored by the American Association for the Advancement of Science, the American Association of School Administrators, and the Council of Chief State School Officers will be useful. Purposes of the conference were to develop guidelines for program appraisal and direction in the teaching of mathematics and the sciences and to evaluate proposals being made for changes in school programs.

Some experimental studies, although few in number, showed concern for the significance of attitudes, the nature of understanding, and the formation of concepts in mathematics.

The significance of maturity and other variables in relation to an understanding of the limit concept was studied by L. T. Smith. Among 578 students in grades 7 through 12, some classes were given three

hours of special instruction in limits, other classes equated in mental age were not. Findings showed: Experience is important; significant gains in conceptualizing limit occurred at all levels; chronological age is not a related variable; and mental age is positively correlated with limits test scores.

PROGRAMS FOR GIFTED

Although much space recently has been devoted to special programs for the gifted, few studies evaluated their effectiveness. But a study of an enrichment program by Roy Gilbert Long showed that both talented and nontalented in an enrichment program surpassed the control group in both achievement and attitude. This was a carefully designed study that induces confidence in the implications concerning the contributions of an enrichment program.

David Wells reported an informal experiment with a modified curriculum for capable students in one eighth-grade algebra class. Achievement of the high-ability eighth-graders was comparable to that of ninth-graders completing a similar course. The former achieved as well or better than the ninth grade control group.

Various programs for gifted students have been advocated. Donald Devine described a seminar to provide an accelerated program for gifted senior-high-school students, and Florence Elder described a seminar to provide an enriched program for gifted junior-high students. Summer seminars supported by National Science Foundation funds with emphasis on topics from contemporary mathematics were described by Eugene Nichols, Ross Nielson and Walter Gohman, and Milton Ferguson. Ferguson's findings from a state-wide summer program at eight centers in Tennessee indicated significant gains in subject-matter achievement by the experimental group, but no significant gains in ability to use knowledge for problem solving.

Even though interest in and support for educational television have increased in recent years, relatively few efforts have been made to use television to teach mathematics. Extensive experimentation at different levels with valid evaluation of all objectives needs to be made before we can know the extent of television's contribution.

In regard to facilities and equipment for the mathematics classroom, the National Defense Education Act has provided funds for improved facilities and equipment, and several surveys have been conducted to determine needs. A U.S. Office of Education study by E. S. Oburn and others found that classroom facilities are usually inadequate and that fewer than half the mathematics teachers surveyed use commercial or improvised equipment, even though models were rated the most valuable teaching aid.

Another government survey by W. Edgar Martin reported requirements and recommendations of

state departments of education in regard to facilities, equipment, and instructional material for teaching science and mathematics at the elementary-school and secondary-school levels.

Financial support by governmental agencies and foundations for research in mathematics should result in improvement in quality and quantity of research in mathematics education. An illustration of this support in action is the Office of Education report of a conference on "Psychological Problems and Research Methods in Mathematics Training." This conference brought together mathematicians and psychologists to discuss approaches to research in mathematics education. The report provides a guide for investigation. It includes a review of completed research, formulation of problems in the learning of mathematics which should be investigated, and research designs and methods appropriate to the conduct of such studies.

The studies made since 1957 point to these general conclusions: There is urgent need for more well-trained secondary mathematics teachers. Substantial improvement is needed in teaching facilities. Although much curriculum development has occurred, there is need for coordination, better definition of goals, concepts and understandings, and adequate evaluative research. Some evidence suggests that we have in many instances expected too little from our students; however, the precise implications for mathematics and the school as a whole are still a moot point. Much curriculum study has been fragmented with emphasis on one level or another rather than concentration on the total program. Opportunities for the talented student have been greatly extended, but again without adequate evaluation and without attention to the total situation.

Research should make maximum use of the techniques, instruments, and conclusions of previous studies of related problems. Donovan A. Johnson's study, "Implications of Research in the Psychology of Learning for Science and Mathematics Teaching," is indicative of the contributions to be found outside the field of mathematics.

In view of the increased cost and complexity of a well-designed study, Kenneth E. Brown offers the following suggestions: Key problems should be identified by groups of teachers and schools. Problems should be investigated by a team approach rather than by individuals. Results should be published and distributed to avoid duplication and to suggest deeper studies. These are basic needs. •

An eighth-grade mathematics test question was, "What is the due date of a promissory note?" Instead of "date of maturity," one pupil wrote, "date of mortuary"; another, "date of maternity."—Richard Richardson in *NEA Journal.*

Evaluation In Terms of Current Practices

How Well Are We Teaching Reading?

EMMETT ALBERT BETTS

In Elementary English

THERE are at least three sources of information to give an indication of success in teaching reading today. They are: studies comparing reading instruction now with an earlier time, leading to a conclusion that reading is being taught as well now as it was a generation or a century ago; experimental studies and surveys, which reveal major needs and point to means of improving instruction; and classroom observations by scholars with mastery of the cognate disciplines, such as phonetics and perception, which are basic to reading instruction. When these sources of information are disregarded, fanatics, faddists, and zealots recommend one-shot remedies.

The following will discuss the evaluation of reading instruction in terms of current practices regarding individual differences, interests, phonics, and thinking. What is done about the first, providing for individual differences, is the foundation of reading instruction.

From published reports and classroom observations, it appears that more attention is being given in more schools to individual differences in learning abilities and needs than at any time since the introduction of grade-level organization of schools in the early nineteenth century. Despite this, there are still far too many schools in which regimentation—the same textbook prescription for all pupils in a grade—is the order of the day.

Emmett Albert Betts is Research Professor in Education and Lecturer in Psychology in the School of Education, University of Miami, Coral Gables, Florida. Reported from Elementary English, *XXXVIII (October 1961), 377–81.*

On the positive side, more pupils are being taught to read today when they are ready—whether they are in kindergarten, first, or a higher grade. Grade-level dictated thinking is slowly but surely being displaced by the "pursuit of excellence." Equally important, those advising parents to teach their five-year-olds to read are under suspicion by those who have been trapped by this tragic advice.

Furthermore, there is a growing recognition of the limitations of group tests for estimating reading readiness. As a result, more emphasis is on teacher use of informal inventories and individual scales, based on significant researches regarding the development of interests, perceptual skills, and thinking abilities.

Today, too, fewer years are lost for pupils assigned to reading groups on the basis of standardized tests of reading achievement. Fewer superior pupils and low achievers have reading indigestion induced by the misuse of standardized tests that conceal rather than reveal the typical 10-to-12-year range in reading abilities of fifth-grade pupils, for example. There is less of the bland sameness of reading diets resulting from the fact that no standardized test yields either the independent or the instructional reading level of the pupil. For estimating reading levels, more use is being made of systematic informal inventories.

RATIONAL THERAPY

Finally, delusions about regimentation and a three-group plan of instruction are being cured by rational therapy. Today, professionally competent administrators are encouraging teachers to test, or try out, variations of individualized and group reading plans in terms of their different levels of professional competence. However, this is not referred to as *methods;* instead, they are concerned with plans for differentiating instruction —for providing equal learning opportunities for all pupils.

Progress on identification and nurture of individual differences is being made in spite of writers, careless with the truth, asserting that differentiated instruction was "invented to divert attention from poor reading instruction."

With the matter of interests, there is evidence that today the pupils' "right to read" is more heavily insured. There is well-placed emphasis on selfselection of readable and interesting materials and on a balanced diet of nonfiction and fiction by protagonists of both individualized and group instructional plans.

Independent reading is considered a blue-chip investment of the pupil's time in science, history, etc. Pupils are encouraged to evaluate their reading in a spirit of friendly candor with their peers, rather than by preparing a stilted book report for the teacher.

In some classrooms, however, reading interest is still stifled rather than nurtured. It appears that reader interest is raised or muted in any type of reading program, depending on attitude and competence of the teacher. No matter what the plan or method, only competent teachers can make a program effective.

PHONICS

There is so much confusion surrounding the word *phonics* today that many teachers approach this facet of reading instruction with mixed emotions. Happily, there are more and more "heads-up" teachers who know their phonetics (the science of speech sounds). They approach word learning in its perceptual and re-cognition setting, teaching the phonic skills so that they are used automatically in silent reading, thus leaving the pupil's

mind free to attend to the thought of what he is reading. That is, they teach phonics as *one* means to fruitful reading rather than as a dead end.

These "heads-up" teachers consider several important factors in perception which give phonics instruction a "forward look.":

Need. Pupil awareness of the need to learn a specific skill; for example, the *kw* sound *qu* in *quiet.*

Grouping and set. Pupil awareness of the *grouping* of sounds of the spoken word as preparation (set) for his identification of the grouping of letters (phonogram) representing those sounds.

Feedbacks: sounds-phonograms. Pupil *feedback* (a circular process) from the examination of the letter groupings of the written word to the sounds of the spoken word; for example, the *application* of phonic skills to the written word during silent reading.

Feedback: meaning. Pupil *feedback* to previous experience so that perception is consummated in meaning; for example, interpreting the meaning of the word in its contextual setting.

Dynamic closure. Pupil's blending of consonant sounds at the beginning or end of syllables, or of two parts of a word to make a whole word; for example, the *t* of *toy* and *r* of *ride* to make the *tr* of *train.*

Insured association. Pupil's saying the vowel sound in a syllable rather than quoting a memorized rule; for example, reproducing the sound of *a* in *cat* or in the first syllable of *satisfy.*

THINKING

As for *thinking* in reading instruction today, considerable evidence indicates a need for more emphasis on teaching pupils how to think in listening and reading situations. In some classrooms, the mere pronunciation of words is accepted as reading. Consequently, pupils are unable to discriminate between facts and opinions, to distinguish between referential and emotive language, to evaluate the relevancy of a statement to a purpose, to organize information in outline form, to draw conclusions from related facts, and so on— that is, to employ those abilities needed to read beyond the lines.

In other classrooms, teachers *plan* to teach pupils how to think. These teachers consider the materials of reading to be concepts, not word forms. They are concerned with the sequence of concept of formation, beginning with organization of the pupil's own personal fund of experience and ending with his own verbalization of that experience. They teach with the attitude that concepts yield vocabulary, not vice versa.

To achieve the goals of reading instruction today, successful teachers today have well-stocked libraries containing a wealth of instructional materials. And they know that there are two ends of the log, but that the heartwood which gives the log strength is the library. •

What Can We Learn From It?

The Special Television Class Assignment

NEIL POSTMAN

In Television and the Teaching of English

FREQUENTLY during the semester a television program of compelling interest will cry out for something more than mere notice in the English classroom. Although it may be inconvenient, a teacher may wish to spend a day or two teaching about it. Accordingly, an assignment to read a story or to write a composition may be changed to the viewing of a special television production.

The "special" assignment does not require extensive preparation and generally results in an informal lesson in which students discuss their reactions as they would a book, movie, or play. While such informality must not be derogated, in an academic context informality sometimes encourages dilettantism or, worse, carelessness. The teacher must guard against these attitudes toward television, just as he does toward other literary forms. One way would be to structure the discussion to maintain informality and at the same time cultivate the habit of disciplined analysis.

If the program is a play, the teacher might ask his students to discuss the plot, theme, characterization, and purpose much as if the students had organized a theater party and returned to school to review their impressions.

Neil Postman is Associate Professor of English Education, New York University, New York City. *Reported from* Television and the Teaching of English, *a report from the Committee on the Study of Television of the National Council of Teachers of English, published by Appleton-Century-Crofts, Inc., 1961. 82–87.*

If the program is a documentary, say, *CBS Reports' Who Speaks for the South?* the teacher might guide the discussion to the program's point of view. He might ask the students to discuss which people they sympathize with and which they disliked. He might try to have his students articulate the reasons for their feelings. Although this program tried to present different sides of a controversial question fairly, it is important that students realize that the movie or television camera injects a point of view by the very process of selecting one thing for emphasis and another for neglect.

In fact, any documentary of this kind, *Cast the First Stone, The Population Explosion,* or *The Jazz Age,* will very likely motivate the teacher to engage his students in a discussion of objectivity.

It is important that the teacher not expect too much when giving a special television class assignment. Since there is only one or two days for discussion, he must accept the fact that his lesson will be superficial. Yet, superficiality has certain virtues. In this instance, the teacher is demonstrating to his students that the content of television can be as relevant to the classroom as many things from books or the stage. The sources of maturing experiences are not the monopoly of a few forms of communication, and the teacher is giving notice that television programs need to be, and can be, thoughtfully evaluated.

SEARCHING QUESTIONS

As a result of a television class assignment, the students may find themselves asking searching questions of television programs they were not assigned. A student may quite unexpectedly wonder why Beaver in *Leave It to Beaver* manages to solve problems that confound other members of the family, or why Matt Dillon of *Gunsmoke* does not marry Kitty, or why Jim Anderson of *Father Knows Best*, unlike almost everyone else, does not have financial problems. Actually, these are rather sophisticated questions and experienced teachers will not expect them to arise quickly and readily. Nevertheless, the special class assignment has the virtue of relating the serious business of evaluating literature to the seemingly passive business of watching television.

In addition, the special class assignment can be useful as an aid in teaching about things other than television. The medium does have value as a carrier of information and ideas about subjects normally carried in the English curriculum. For example, teachers and students who in 1960 were studying the structure of the English language might have profited from the Bell Telephone presentation of *The Alphabet Conspiracy*. This program, which has been shown several times, is concerned with the science of language and explains in popularized fashion the basic assumptions, methodology, and terminology of linguistics. Don Herbert's *Mr. Wizard*, on one occasion, also dealt with the science of language. If the teacher is willing to make use of such programs, he may ask his students to view one of them in lieu of, or as a supplement to, their regular assignment.

LINGUISTIC INFORMATION

Furthermore, teachers should not overlook the fact that television is in itself a constant and interesting source of linguistic information. Teachers wishing to describe to their students the various dialects of English will find satisfying examples on television—the New England speech of President Kennedy or Henry Cabot Lodge, the Texan drawl of Vice-President Johnson, the midwestern twang of Herb Shriner. Courageous teachers might wish to call attention, for purposes of analysis, to the colorful

vocabulary of Dizzy Dean or the quaint but obscure syntax of Casey Stengel.

The point is that, with the exception of face-to-face communication, television is probably the most abundant source of linguistic experience that students have. Whether a teacher is interested in prescribing a particular set of speech patterns or concerned with increasing his students sensitivities to the fascinating varieties of American English, television can be a useful aid.

To introduce a unit on the social and economic utility of standard English, one teacher required his students to view two programs, *Father Knows Best* and *The Life of Riley*. The students were asked to note the differences between the speech patterns of Jim Anderson (played by Robert Young) and Chester Riley (played by William Bendix) and, at the same time, observe corresponding differences in their professions, status, and dress. It was observed during the class discussion that Riley's limited vocabulary frequently frustrated his attempts to communicate with members of a different social class, while Anderson appeared to function with equal effectiveness among all kinds of people.

Another teacher, in introducing a brief unit on "linguistic snobbery" assigned the task of identifying the dialects, especially the "foreign accents," that tend to be sources of humor, or, under certain circumstances, ridicule. Using television as one source, the students discovered that the Spanish-English of Desi Arnaz, the Italian-English of Pat Harrington, Jr., and the Yiddish-English of Mollie Goldberg appeared to be objects of humor in themselves.

A third teacher, hoping to make his students aware of the changing character of language and, at the same time, increase their vocabulary, required his class to note any new words or forms heard on television. One student noted the increasing use of *like* as a conjunction, another noted the use of *science* as a verb, a third listed as "new" words: *perambulate, cogitate, genuflect,* and *insipid.*

NOTE OF CAUTION

One note of caution is in order. Teachers who have tried the special television assignment have found that they cannot insist that all students view the same program, or, for that matter, any program at all. Television viewing, unlike reading, tends to be a family activity and a parent wishing to see and hear Lawrence Welk may not accept the Sacco-Vanzetti story as an adequate substitute. The teacher must remember that television is so much a part of the warp and woof of the evening hours that a seemingly innocent assignment may tear the fabric of family peace. "Team-watching" at one student's home may be an alternative, or in individual cases a reading assignment in a related area may be a solution. •

Some Suggestions for

Evaluation of Guidance Programs through Studies of Students

FRANK E. WELLMAN and DON D. TWIFORD

In Guidance Counseling and Testing Program Evaluation

GUIDANCE programs exist to serve students, either directly or indirectly. Primary objectives all relate to student behavior and development, which means that the only true measure of guidance-program value must be in terms of what happens to students.

There are difficulties in conducting evaluative studies where student outcomes are the basic criterions. The following suggestions do not represent elaborate research designs, but rather an attempt to present some methods for the collection of basic data and a few possibilities for the development of more elaborate data collection and research projects. Practically all state and local school systems should be able to carry out some of these suggestions, and those having already collected much basic data should be ready to launch comprehensive and well-controlled experimental studies.

Ideally, there should be comprehensive research projects initiated each year in each state to evaluate certain aspects of guidance programs. Then, with cooperation and coordination among states, appropriate evaluation of effectiveness could be accomplished efficiently and without undue strain on any one state or school system.

Frank E. Wellman and Don D. Twiford are Specialists, Program Organization, U.S. Office of Education, Washington, D.C. Reported from Guidance Counseling and Testing Program Evaluation, *published by the U.S. Office of Education, 1961, 26–30.*

It has been suggested that achievement of some of the objectives of NDEA, V-A programs can be evaluated by obtaining answers to certain questions which reflect desired outcomes. The following questions might serve as basic criterions for determining what data should be collected to relate the extent of outcomes to program activities. They may also prove valuable in forming hypotheses to be tested in experimental studies of guidance programs and specific program activities.

1. Do students develop greater understanding of their abilities, aptitudes, and interests?
2. Are students, and their parents, fully aware of opportunities and requirements for education and careers?
3. Do students select courses,

and achieve in them, in line with their abilities, aptitudes, interests?

4. Do students able to do so finish secondary school?

5. Do students capable of doing so continue education beyond secondary school?

6. Are those students continuing education beyond the secondary school successful in their educational pursuits?

7. Are significant numbers of the very able students getting more extensive background in mathematics, science, and foreign languages?

The data which may be collected in the study of student outcomes may be classified as follows: (1) data collected uniformly statewide or systemwide for a specified segment of the student population, (2) data collected uniformly for a sample of a specified segment of the student population, and (3) comprehensive case data of a specialized nature for predictive and experimental research.

Suggested evaluative criterions for which statewide data may be feasible include: (1) persistence in school, (2) enrolment in courses in school, (3) planning for post-high-school activities, and (4) post-high-school activities. State and local systems may want to develop other areas of data collection which will better meet local evaluative needs.

Two variables, sex and scholastic aptitude, are proven to be related to variance in the above criterions. They are relatively easy to study and are suggested as two fundamental classifications in the collection of statewide data. Scholastic aptitude grouping by quarters is suggested, using the results of the most recently administered scholastic aptitude test and classifying on a national norm basis. In states where all ninth-graders receive this type of test, it is desirable to use ninth-grade grouping throughout, thus minimizing the selective factor created by those who leave school early and students repeating grades.

In regard to sampled data, any complete list of studies for which this type of data is appropriate would necessarily be lengthy. The following list is only suggestive. The term "sampling" is used here to include studies by: selected states or areas, selected pupil populations, selected school units, and other groupings which may lend themselves to sampling studies.

Some studies which may be conducted by utilizing data collected on a "sampling" basis include those suggested below. All studies listed were suggested by state guidance personnel. State and local systems are urged to examine their particular needs for comprehensive research and to design studies to meet those needs, rather than to undertake studies which are suggested but which may not be the most appropriate approach to the local program.

Periodic follow-up studies of high-school graduates to maintain continuous information regarding higher education, employment, marriage, etc., for at least five years after graduation.

Studies of student high-school

and post-high-school achievement, including such details as differential course achievement and persistence in a particular curriculum with controls on such variables as abilities, aptitudes, interests, and other characteristics about which data can be obtained.

Studies of drop-outs, both high school and college, with particular attention to reasons for and characteristics of drop-outs, which can be used to identify potential drop-outs.

Studies of factors which may influence student behavior and development, such as: motivation, particularly as it relates to school achievement and educational and career choices; influence of socio-economic factors; influence of school size and curricular offerings; and influence of parents and teachers.

Studies in the prediction of curriculum and career choices and subsequent persistence and success.

Studies in the prediction of performance in post-high-school activities from data available during high-school attendance.

Studies of the influence of the introduction of new guidance programs and improvement of existing programs under NDEA, V-A.

The individual case study does not lend itself readily to statistical analysis in evaluating guidance programs; however, case data on small groups of students with certain common characteristics can be treated statistically. The particular value of case data is in the study and improvement of guidance techniques which are indirectly related to evaluation. Also, this approach may provide valuable material for furthering effective public relations. The following are some suggested uses for case-study techniques and data:

Determining the relationship between counselor activity and student choice and decision.

"Humanizing the guidance story," such as developing the human interest aspects of a particularly successful case.

Providing illustrative materials for inservice education activities or techniques.

Providing the basis for long-term appraisal.

Developing counselor insight and evaluating student insight.

The case-study method in guidance consists essentially of the application of counseling techniques to individuals and subsequent observations in behavior. The following is a suggested list of problem types which may be studied by this approach:

Potential dropouts and underachievers; exceptionally able students in all areas, and the student with multiple potentialities; economically deprived students; students with low-level motivation; social rejects and ethnic groups; and the mentally and physically handicapped.

Careful analysis of case data on problems such as those listed above may provide sufficient information for the formulation of hypotheses which can be tested by comprehensive and well-controlled experimental studies. In the final analysis, good experimental research is the most promising approach to determining effectiveness of program activities and to subsequent program improvement. •

★ With Education in Washington ★

THE EDUCATION DIGEST WASHINGTON BUREAU

CARE at Christmas.—A heart-warming Christmas report from CARE tells how American farmers are helping to raise a bumper crop of school children across the world. Nearly 11 million undernourished children are sharing in school-feeding programs based on CARE distributions of U.S. farm surpluses. In 18 countries from Panama to Pakistan, the food gifts boost attendance and turn listless youngsters into eager scholars, according to glowing reports sent to CARE by school administrators and teachers.

In Bogota, Colombia, for example, public-school enrolment soared from 70,000 to 90,000, and classes had to go on split-shifts in the first year the free-lunch program started. In Libya, the daily food is credited with bringing an annual 25 percent increase in elementary-school enrolment. In the Philippines, farm kids who used to stay home to help their parents during the harvests have been at their desks every day; they don't want to miss their milk. And in Ceylon, when a mix-up delayed the baking of flour into buns, 60 school principals sent telegrams of protest to the Ministry of Education.

The CARE programs have a significance far beyond the immediate benefits for the youngsters who are fed. Lack of education is a root cause of the poverty suffered by most of the people in underdeveloped lands, and governments are expanding public education facilities to an unprecedented degree.

But the long years of hopelessness have made many parents apathetic about sending their children to school. Far more frequently, boys and girls come to class so hungry that they cannot concentrate. Now, with the U.S. food attracting new students and providing nourishment during the day, educators see a turning point in the fight against ignorance.

Foods served to the children depend on the commodities made available for foreign relief from America's farm stockpiles. Currently, the servings range from a mid-morning glass of milk, or milk and a roll, to a bowl of hot corn meal mush, plus milk and a roll for lunch.

The makings come from milk powder, enriched flour, and corn meal given to the nonprofit international relief agency from U.S. Department of Agriculture stockpiles. To finance their distribution abroad, CARE combines Partnership Programs, whereby host governments pay the costs, and the CARE Food Crusade, which appeals to Americans for contributions of $1 per package, to reach needy families or institutions.

Under both plans, all supplies are delivered as "A gift from the people of the United States of

America." To bring a personal greeting of friendship, the Food Crusade units also bear the name and address of the contributor. Wherever possible, this food-assist to learning is made even more effective by CARE deliveries of educational tools – writing supplies, new books, classroom equipment.

So valuable have the school plans proved in the nine years since they were initiated as part of CARE's food relief that local governments, wherever possible, are now helping to feed their own children. The vast majority of the nearly 11 million boys and girls who are benefiting in the current school term are covered by Partnership Programs in Ceylon, Colombia, Egypt, Guatemala, Honduras, Korea, Libya, Mexico, Panama, the Philippines, and Poland. The dollars donated through CARE offices in the U.S. are the sole support of the school feedings in Afghanistan, Haiti, Hong Kong, India, Israel, Pakistan, and Turkey.

Approximately 750,000 Food Crusade packages are going to the schools, or almost 18 percent of the 4.5 million $1 CARE packages in the current year. A typical Food Crusade unit prepared for schools consists of 27 lbs. of powdered milk, enough to make 432 half-pints.

New Approach?—Rep. Cleveland M. Bailey (D-W.Va.), a staunch supporter of federal aid, has proposed "a new approach to achieve our goal: stimulation and encouragement of education." His proposal is to appropriate to each state federal funds amounting to 2 percent of the state's total expenditures for public elementary and secondary education.

In addition, states with annual per capita incomes below the national average would have their grants increased by the percentage by which the state lags the national average. Under this formula, states with greater educational expenditures would receive larger federal grants, and reductions in school spending would be penalized by equivalent reductions in the federal grant.

HEW Secretary Abraham A. Ribicoff has commended the Bailey proposal. It was unanimously approved by the legislative committee of the Council of Chief State School Officers, but full membership of the Council withheld endorsement at its November meeting "until we know more of the specifics."

Rep. Bailey's proposal will be introduced as a bill next year, if public and Congressional reaction is favorable. A former teacher, principal, and superintendent in West Virginia schools, Rep. Bailey is the second-ranking member of the majority party on the House Education and Labor Committee.

Adult Education.—"Adult Education in the Public Schools," the first joint policy statement ever prepared in this area of education, was released at the ninth annual con-

vention of the National Association of Public School Adult Educators (NAPSAE) in Washington last month. The statement was developed by the American Association of School Administrators, the Council of Chief State School Officers, the National Congress of Parents and Teachers, and NAPSAE.

The four groups agree that public funds should pay for adult and community education and that adult education is a logical part of public-school education programs because public schools are available to adult students, are not used at night, and have the staff and facilities with which to teach adults. They are also in accord in thinking that public-school education programs for adults should be under the direct control of local boards of education and that adult programs should not be limited to vocational, remedial, or academic subjects.

The statement concludes by stating: "The extent to which various sources of revenue are used for public-school adult education should be the decision of each state and local board of education. Provision for an adequate adult education program should be included, either independently or in cooperation with other districts, in every board of education budget."

Educational Broadcasting.—The Federal Communications Commission has established an Educational Broadcasting Branch in its Broadcast Bureau. The new branch, part of a Research and Education Division which absorbs the former Economics Division, is responsible for compiling information, conducting studies, and making recommendations relating to educational broadcast services, and serving as a clearinghouse of information for, and liaison with, private and government groups.

Hyman H. Goldin, who was chief of the former Broadcast Economics Division, has been named head of the augmented division. The chief of the Educational Broadcasting Branch is to be named later.

Vocational Education.—President Kennedy has appointed a 26-member panel of citizens drawn from education, government, industry, labor, and agriculture to review and evaluate the national vocational-education acts. The panel's work is expected to be comparable in historical significance with that of similar bodies previously appointed by Presidents Wilson, Hoover, and Roosevelt.

Chairman of the President's panel is Benjamin C. Willis, superintendent of schools, Chicago, Illinois. Its membership includes nine vocational educators. The USOE's Division of Vocational Education is supplying staff services to the panel through a special five-man staff. The report and recommendations of the panel are to be placed before Congress when it convenes in January 1963. •

• Educational News •

CHANGES IN SUPERTENDENCIES:

Teaneck, N.J.: **Harvey B. Scribner,** formerly of Dedham, Mass., has succeeded **Theos L. Anderson,** now superintendent at Cleveland Heights, Ohio.

Peabody, Mass.: **J. Henry Higgins,** formerly assistant superintendent, has been named superintendent.

Belleville, N.J.: **Frank M. Durkee,** formerly assistant superintendent, has succeeded to the superintendency.

Mansfield, Ohio: **Woodrow K. Zinser,** formerly of Mentor, Ohio, has succeeded **John S. Rinehart,** now at Bethpage, Long Island, N.Y.

Steubenville, Ohio: **Charles M. Patterson,** formerly of Bay Village, Ohio, is successor to **C. C. Roberson,** now professor of secondary education at Ohio Northern University, Ada.

Hartford, Conn.: **Robert H. Black** has announced his retirement in April.

Allentown, Pa.: **John S. Cartwright** has announced he will retire at the end of this school term. He will become professor of education at Lehigh University, Bethlehem, Pa.

COLLEGE PRESIDENTS:

Rice University, Houston, Tex.: **Carey Croneis** has been appointed chancellor and **Kenneth S. Pitzer** has been named president.

West Virginia University, Morgantown: **Paul A. Miller,** provost at Michigan State University, East Lansing, has been named successor to **Elvis J. Stahr, Jr.,** now Secretary of the Army.

Ohio Wesleyan University, Delaware: **David A. Lockmiller** has resigned to be executive director, National Home Study Council, Washington, D.C.

Bryant College, Providence, R.I.: **E. Gardner Jacobs,** vice-president, has been named successor to his father, **Henry L. Jacobs,** who was president for 53 years.

Nebraska State Teachers College, Kearney: **Milton Hassel,** academic dean, Mankato State College, Minn., has been appointed president.

Monmouth College, West Long Branch, N.J.: **Edward G. Schlaefer,** president 29 years, has retired.

TEACHER-TRAINING INSTITUTIONS:

Ball State Teachers College, Muncie, Ind.: **Earl Johnson** has been named dean of the education division.

Harvard University, Cambridge, Mass.: **Roderick F. McPhee,** formerly assistant secretary of the American Association of School Administrators, is now assistant professor of education in the graduate school of education.

State University of Iowa, Iowa City: **Howard R. Jones,** professor of eucational administration, University of Michigan, Ann Arbor, has been appointed dean of the college of education, succeeding **E. T. Peterson.**

Furman University, Greenville, S.C.: **Charles K. Franzen,** formerly of Martinsville, Va., is now assistant professor of education.

OTHER CHANGES AND APPOINTMENTS:

Patrick M. Malin, executive director, American Civil Liberties Union, has been appointed president of the American-operated Robert College of Istanbul, Turkey, effective April 1.

Wilmer V. Bell, Baltimore, Md., is president of the National Association of Public School Adult Educators for 1961. **Robert F. Shenz,** director of Westchester Adult School, Los Angeles, Calif., is president-elect.

RECENT DEATHS:

Wendell Wright, former dean of the school of education, Indiana University, Bloomington, at the age of 68.

Franklin Dunham, chief of radio and television services, U.S. Office of Education, since 1945. He was 69.

Study of Communism

COMMUNISM is becoming respectable—at least as a high-school

course of study. Until recently the climate of the times was against such instruction.

For instance, it was less than four years ago that the American Legion reversed its long-standing policy against teaching anything about communism in the public schools. Now the Legion is working with the National Education Association on a program of study about communism that may be offered to public schools as a model course. There still are, however, hard pockets of resistance to the idea.

Fred Hechinger, education editor of *The New York Times*, recently queried all 50 state departments of education on the growing movement toward high-school courses on communism. The replies showed 13 which kept hands off local curriculums, nine states which have or are preparing special units on communism, and 12 which prescribe teaching about communism not as a separate unit but as part of social studies or history.

In Florida, under a new law passed last May, all high schools must, by September 1962, have a 30-hour course on Americanism vs. Communism. And the Louisiana Legislature this year voted $30,000 annually for seminars for high-school students on the tactics and strategy of communism.

In California, facts about communism will be taught in the high schools next year through a course being developed by the state department of education. Decision on whether to teach the course will be up to the local schools.

Selfteaching in Reading

THE Carnegie Corporation of New York has announced a grant of $70,000 to the Center for Program Instruction to develop selfteaching textbooks for junior-high-school students to help them improve their reading skills.

The project will be conducted during the next two years by the center in cooperation with the New York City school system. Three teachers of reading will be on leave from the city schools to work at the Center on selfinstructional materials for students in grades 7 through 9, which will be tested in 48 junior-high schools in the city.

Last spring the Center and the New York City Junior-High-School Division, with a planning grant from Carnegie, tried programed texts with a small number of poor readers in the seventh grade. They found that students improved their reading ability after using the experimental texts for periods as short as one-half hour.

Disturbed Children

A NEW approach to the problem of helping emotionally disturbed or potentially delinquent children has been launched at George Peabody College for Teachers, Nashville, Tenn.

Thirteen selected men and women have begun nine months of training for work as teacher-counselors in special residential

schools to be established in Louisville and Nashville.

The program is part of an eight-year demonstration project backed by a $1,896,000 grant from the National Institute of Mental Health. Its purpose is to help alleviate the shortage of qualified personnel in mental health and to provide additional facilities for disturbed children.

MPATI Adds Courses

THE Midwest Program on Airborne Television Instruction (MPATI) will add four courses when the "flying classroom" begins its second semester of lesson telecasts on January 29.

The new courses include American literature for senior-high school, Spanish for junior-high school, social studies for grades 3 and 4, and primary science for kindergarten through second grade.

By adding the four courses, MPATI will offer a total of 20 courses to be telecast each week. The four-day-per week telecast schedule will be maintained during the second semester.

New Math Tests

THE Educational Testing Service, Princeton, N.J., has announced that 11 new cooperative math tests, which reflect the significant changes taking place in mathematics instruction will soon be available.

The new tests for junior- and senior-high-school students cover arithmetic, algebra, geometry, and trigonometry. Final forms of these tests will be administered in a representative sample of schools early in May 1962 to establish differentiated national norms.

DATES OF THE MONTH:

Dec. 3-8, American Vocational Association, Kansas City, Mo.

Dec. 27-29, Modern Language Association of America, Cincinnati, Ohio.

Dec. 27-29, National Business Teachers Association, St. Louis, Mo.

DATES OF THE COMING MONTHS:

Feb. 14-17, American Association of Colleges for Teacher Education, Chicago, Ill.

Feb. 17-21, American Association of School Administrators, Atlantic City, N.J.

Feb. 24-28, National Association of Secondary-School Principals, St. Louis, Mo.

Mar. 4-7, Association for Higher Education, Chicago, Ill.

Mar. 4-8, Association for Supervision and Curriculum Development, Las Vegas, Nev.

Mar. 24-28, Department of Elementary School Principals, NEA, Detroit, Mich.

Mar. 25-29, National Science Teachers Association, San Jose, Calif.

Mar. 25-30, Department of Audio-Visual Instruction, NEA, Kansas City, Mo.

April 6-10, American Association for Health, Physical Education, and Recreation, Cincinnati, Ohio.

April 8-14, National Library Week.

April 12-14, National School Boards Association, St. Louis, Mo.

April 15-18, National Council of Teachers of Mathematics, San Francisco, Calif.

April 16-19, American Personnel and Guidance Association, Chicago, Ill.

New Educational Materials

Television in the Lives of Our Children. Wilbur Schramm, Jack Lyle, and Edwin B. Parker. Stanford, Calif.: Stanford University Press, 1961. Pp. 324. $6.00.

"No informed person can say simply that television is bad or that it is good for children."

That is the introductory statement in this report on the first major study on the North American continent of the complicated way television operates in the lives of children.

Among other items, this three-year study of 6,000 children and 2,300 parents, teachers, and school officials shows that the average North American child, from ages 3 to 16, spends one-sixth of his waking hours at television—as much as he spends in school and more than is devoted to any other activity except sleep and play.

The book presents the basic facts of television use, viewing conditions, kinds of programs, etc., and examines the chief variables—intelligence, social backgrounds, home and peer-group relationships, etc. which make it possible to predict generally what use children will make of television.

One interesting finding is that children in a town without television revealed a one-year lag in vocabulary when entering school than did children in a town with television. Interesting, too, that the study team was forced to move its operation to Canada to find a town without television.

Oswego, Fountainhead of Teacher Education. Dorothy Rogers. New York: Appleton-Century-Crofts, Inc., 1961. Pp. vii + 305. $5.00.

This is the history of the College of Education at Oswego, N.Y., an institution which played an important role in teacher education. It initiated the first three great movements in American education: Pestalozzianism, Herbartianism, and progressivism. For two decades it was the leading normal school in this country.

The story is treated by administrations from 1861 to 1960, discussing each in terms of general developments, curriculum, students, and staff.

Because of the wide influence this institution had on other teacher-education institutions, this book is a near-national history of teacher education. There is much descriptive material concerned with staff members and students, detailing the manners, dress, behavior, etc., providing an intimate record of the growth and development of the teaching profession in America. Throughout the book, the author deals with people and issues in an informative and entertaining style.

Education in the Secondary School. Lester D. Crow, Harry E. Ritchie, and Alice Crow. New York: American Book Co., 1961. Pp. x + 424. $5.90.

This book provides a thorough introductory description and study of modern secondary education, emphasizing the functions of the school in relation to the characteristics and educational needs of adolescents, their lower-school background, their post-high-school plans, and the demands of society. Understanding the students, the staff, and the community is stressed throughout the book.

The wide range of topics includes: the democratic ideals and objectives of education, details of school finance, school organization, and curriculum sequences and components. There are numerous examples of current secondary-school practices in all types of

community and curriculum situations that enrich discussions and give a tone of practical realism to the text.

There is extensive treatment of today's students at the secondary level, including vivid illustrations of basic psychological and educational principles, and up-to-date commentary on contemporary problems.

A Forward Look—The Preparation of School Administrators 1970. Edited by Donald E. Tope. Eugene, Ore.: Bureau of Educational Research, University of Oregon, 1960. Pp. vi + 177.

This publication is made up of the papers presented at a conference held at the University of Oregon in August 1960, at the conclusion of foundation-supported activities and study concerned with improving preparation programs for school administrators. The papers, taken together, give an accurate picture of the major developments in providing a more adequate preparation program for potential administrators.

Among the topics covered are: the place of the social sciences in the education of school administrators, finding potential school administrators, the changing content of the preparation programs for school administrators, special aspects of preparation programs, and preparations for professors of educational administration.

A second section of the publication is devoted to papers on the study of the community as the environment of educational administration.

American Education — Facts, Fancies, & Folklore. Raymond P. Harris. New York: Random House, 1961. Pp. vii + 302. $5.00.

Noting in the preface that the best writing about education is tucked away in the professional literature, where the general public is unlikely to encounter it, the author writes:

"And inevitably, a great many highly dubious statements about our educational process have been placed before the American people as the alleged 'facts'. It is high time to expose these distorted concepts as the folklore they really are."

With strict avoidance of educational jargon, the book discusses the principles and issues that have been the sources of controversy due to distortion and misunderstanding. It is a calm, thoughtful approach, attempting to deal with inaccurate generalizations frequently encountered in the criticisms of our schools. Many of the false images concerning teachers, students, curriculums, etc. are dissolved as the author patiently probes into the roots of the folklore.

Modern School Shop Planning. (Third Edition.) Ann Arbor, Mich.: Prakken Publications, Inc. 1961. Pp. 223. $4.50.

This revised edition provides a comprehensive source of practical information on all aspects, including purchasing, of planning and equipping the school shop.

Edited by Lawrence W. Prakken, editor and publisher of SCHOOL SHOP magazine, the book is designed to aid the initiate as well as those in the field to accomplish excellence in school-shop planning.

There are sections on planning and equipping shops for: general shop, automotive, drafting, electricity and electronics, graphic arts, machine shop, metalworking, woodworking, and technician training. The information is up-to-date, reflecting interests and developments appearing after the second edition in 1957.

There are detailed tool and equipment lists for shops and programs ranging from the kindergarten to post-

high-school technical courses. The lists make suggestions as to quality and quantity of tools and equipment according to grade level and class size for all shop areas.

There is a generous use of photographs and illustrations. Over-all, this is a broader and more thorough presentation than earlier editions of this unique and popular planning book.

Other Materials Received:

Elementary

Teaching and Learning in the Elementary School. Dorothy G. Petersen and Velma D. Hayden. New York: Appleton-Century-Crofts, Inc., 1961. Pp. xv + 538. $6.50.

Helping Children Read. Peggy Brogan and Lorene K. Fox. New York: Holt, Rinehart and Winston, Inc., 1961. Pp. xi + 330. $3.75.

Arithmetic for Teachers. Wilbur H. Dutton and L. J. Adams. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1961. Pp. xiii + 370. $7.95. For inservice instruction and for use in lower division mathematics courses.

The Man Who Walked Around the World. Benjamin Elkin. Chicago: Childrens Press, 1961. Pp. 32. $2.50. A Reading Laboratory book.

This Is Our Land. Josephine Van Dolzen Pease. Chicago: Rand McNally & Company, 1961. Pp. 58. $2.95. A companion book to *This Is the World.*

Abe Lincoln's Hobby. Helen Kay. Chicago: The Reilly & Lee Company, 1961. Pp. 30. $2.75. A story about Lincoln and his love for cats.

Basic Science Handbook K-3. Wilbur L. Beauchamp and Helen J. Challand. Chicago: Scott, Foresman and Company, 1961. Pp. 352. $3.20. A reference book for teachers. Includes experiments, activities, a dictionary of scientific terms, and background information.

Secondary

Teen-Age Treasury of Our Science World. Edited by Seon Manley and Gogo Lewis. New York: Funk & Wagnalls, 1961. Pp. xiv + 335. $4.95. Contains essays, poetry, short stories, and selections from biographies and great novels.

Using Latin, Book One. Annabel Horn, John Flagg Gummere, and Margaret M. Forbes. Chicago: Scott, Foresman and Company, 1961. Pp. 448. $4.08.

With Nelson at Trafalgar. C. M. Nelson. Chicago: Reilly & Lee Co.,

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1961. Pp. 206. $2.95. Designed for ages 12 and up.

Education for Social Competence; The Social Studies in the Secondary School. (Revised Edition.) I. James Quillen and Lavone A. Hanna. Chicago: Scott, Foresman and Company, 1961. Pp. 536. $5.50.

Guiding Superior and Talented High School Students. Frank S. Endicott. Chicago: North Central Association of Colleges and Secondary Schools, 1961. Pp. 84. A report of the Project on Guidance and Motivation of Superior and Talented Students.

College

New Horizons for the Teaching Profession. National Commission on Teacher Education and Professional Standards, NEA. Washington, D.C.: National Education Association, 1961. Pp. xi + 243. $3, cloth; $2, paperbound. Report of the two-year project directed toward the establishment of new goals and ways of advancing the standards of the teaching profession.

The Role of American Higher Education in Relation to Developing Areas. Edited by Alison Griffith. Washington, D.C.: American Council on Education, 1961. Pp. ix + 70. $2.00.

Memo to a College Faculty Member. Earl J. McGrath. New York: Bureau of Publications, Teachers College, Columbia University, 1961. Pp. ix + 52. $1.75.

Doctoral Study; Fellowships and Capacity of Graduate Schools. John L. Chase. U.S. Office of Education Circular 646. Pp. viii + 65. Available from U.S. Government Printing Office, Washington, D.C. $.45.

General

The New Media in Education. Edited by Jack V. Edling. Sacramento, Calif.: Sacramento State College Foundation, 1961. Pp. ix + 99. $.50.

The Aeneid. A new translation by Patric Dickinson. New York: New American Library, 1961. Pp. 319. $.75, paperback. A Mentor book.

Toward a Democratic Education. H. Gordon Hullfish. Columbus, Ohio: College of Education, The Ohio State University, 1961. Pp. ix + 90. $2.00.

Lists of Free and Inexpensive Teaching-Learning Materials. Compiled by Hugh B. Wood. Eugene, Ore.: University of Oregon School of Education, 1961. $1.50.

School Custodian Training Manual. (Second Edition.) N. L. George. Houston, Tex.: Bureau of Education Research and Services, University of Houston, 1961. Pp. iv + 195. $2.00.

United States Aircraft Missiles and Spacecraft, 1961. Washington, D.C.: National Aviation Education Council, 1961. Pp. 156. $1.50.

Administering City and County School Programs. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1961. Pp. 128. $1.50.

The School Psychologist. Mary Alice White and Myron W. Harris. New York: Harper & Brothers, Publishers, 1961. Pp. vii + 431. $6.00.

Television and the Teaching of English. Neil Postman and Committee on the Study of Television of the National Council of Teachers of English. New York: Appleton-Century-Crofts, Inc., 1961. Pp. x + 138. $1.00.

Books in the Schools. Edited by James Cass. New York: American Book Publishers Council, Inc., 1961. Pp. v + 64. $1.00.

Audio-Visuals

Essentials of Russian; Pronounciation, Conversation, and Comprehension. Andre Von Gronicka and Helen Bates-Yakobson. An LP record and manual. Dover Publications, Inc., 180 Varick St., New York 14, N.Y. $4.95.

Understanding Matter and Energy. An 18 minute, 16mm, color film designed for junior-high and senior-high school. Available from International Film Bureau, 332 S. Michigan Ave., Chicago 4, Ill.

STAS Volume Set. A kit designed to show the basic principles of mathematics and physics to the cone, sphere, and cylinder. Available from Models of Industry, Inc., 2100 Fifth St., Berkeley 10, Calif.

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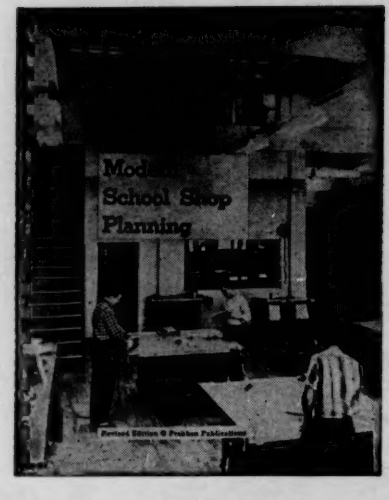

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